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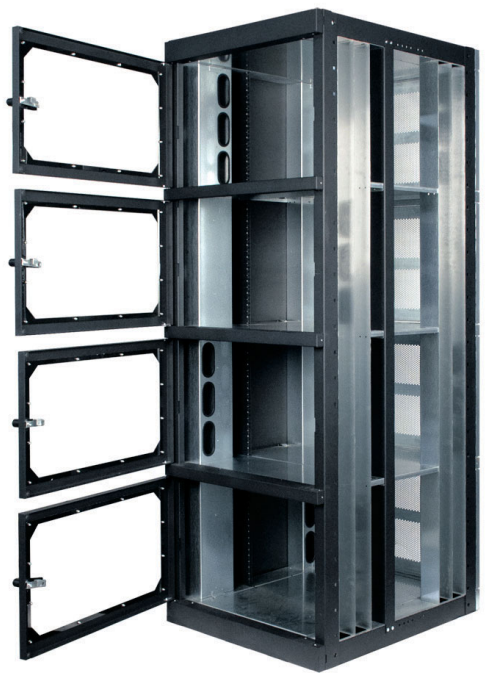
Unique Cabinets, Clever Features

Rack Solutions Designs Products To Fit Customers' Specific Needs



Texas-based manufacturer Rack Solutions has once again come up with an innovative rack design that will undoubtedly have an influence on the infrastructure of data centers. The company recently released what may be its most auspicious rack to date. The popRack provides a secure, self-contained means to connect up to four tenants to their respective telecommunications carriers. This cutting-edge enclosure protects the tenants' infrastructures from unauthorized access by isolating each tenant's distribution panels and cabling in a single compartment.

Clever Features

Rack Solutions integrated this unique cabinet with a number of clever features, the most distinctive of which are the segregated cable channels (located in front and back) within each compartment that prevent access from any place else within the cabinet. The front channel's function is to isolate the cables that connect the tenant to the respective carrier or carriers. The rear channel's purpose is to isolate the cables that connect to the tenant's network.

This cabinet was created specifically for use in Point of Presence (POP) rooms. These telecom connection areas, also known as "meet me rooms" (MMRs) are prevalent in colocation centers, allowing companies such as AT&T, Sprint, Level 3, CenturyLink, or Inteliquent to physically connect to tenants providing transit service or Internet access.

Prior to the popRack, connecting a company with a telecom carrier typically required that an entire rack be dedicated to one customer, and in most instances, this rack was significantly underutilized. Because security is essential in a "meet me room" environment, an entire lockable cabinet, containing only a few distribution panels, devoted to a single client, certainly seems less than optimal. Given that data center floor space is indispensable, such inefficiencies are difficult for data center managers to justify.

popRack designer Whit Wilson says the idea for the popRack originated the same way most of Rack Solutions' new products do. "We had a customer who needed a custom solution to mitigate data center inefficiencies for a large-scale project. So we developed one."

And like many of the rack manufacturer's developments, it became a solution that is now being adopted by others in the data center space. "It's just one of those things that users don't realize they need until they see how well it's working for someone else. Then naturally, they want it, too," Wilson says.

popRack Specifications:

- Static load capacity: 2,000 pounds
- Dimensions: 89 x 30 x 36 inches (HxWxD)
- EIA 23-inch center mounting posts
- 2-post, square mounting holes
- Reversible doors
- Durable powder coat finish on front exterior
- Plexi-glass windows on each compartment
- Zinc plating on interior and rear exterior
- Ships fully assembled

Other Rack Specialties

Rack Solutions has become most widely known for its four-post, open-frame racks available in heights from 24U to 58U. "The 58U is ideal for high-density deployments, including cloud and virtualization environments," says Dennis Feeney, vice president of Rack Solutions. These open frame racks are very competitively priced, starting at just $429.99.

The company also makes 18U to 42U cabinet enclosures and mounting rails for servers and other equipment from all the leading OEMs. No matter what rack-based problems you may encounter, it's likely that Rack Solutions either has a product that will help, or its team can design and build one that will meet your needs and your budget.

"I think the most noteworthy advantages that distinguish us from many other rack companies are that we generate designs quickly, we produce mass volumes right here in our U.S. factory, and we ship on time," says Feeney. "We can handle lots of requests that others can't or that wouldn't make financial sense for them to even consider. We have the luxury of managing all aspects of the business from design to delivery."

Rack Solutions also manufactures rails, shelves, KVMs, two-post conversion products, and other items designed to resolve issues and help companies overcome rack-mounting obstacles. P

Contact:
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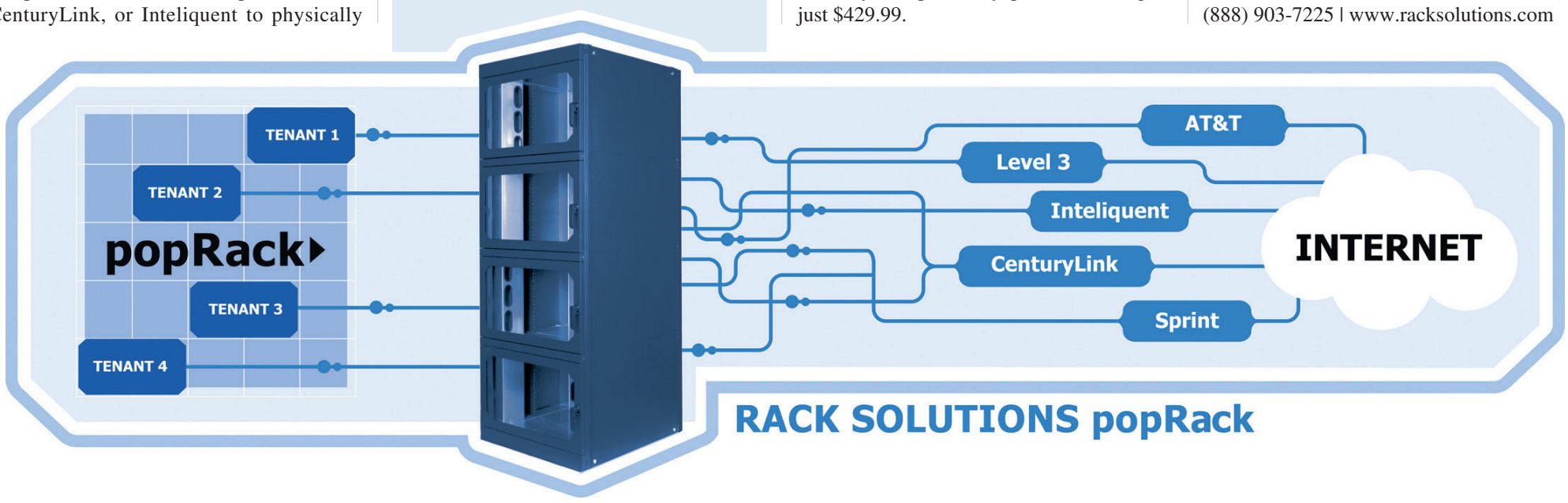

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Tech Sector Execs Optimistic About The Coming Year

KPMG has released its annual "Technology Industry Business Outlook" report based on a survey of 122 tech industry executives. This year, respondents were more optimistic than last year about their companies' potential revenues and employment growth for the following year. Of those surveyed, 57% expected their companies would employ more people next year (compared to 49% in 2011), and 67% anticipate their companies' revenues to be "moderately higher" next year (compared to 60% in 2011). Respondents don't expect dramatic revenue growth, however, as 10% anticipate "significantly higher" revenue next year (compared to 17% in 2011).

Former Hynix Plant Might Become Data Center

According to a report in the Oregon newspaper *The Register-Guard*, Seattle-based Real Property Investors has agreed to buy the former Hynix plant in Eugene, a 1.2-million-square-foot facility situated on 200 acres of property. Along with two other Seattle-based firms, Real Property Investors has a stated goal of acquiring properties to transform them into operational data centers, but the firm has not commented specifically on the Hynix plant purchase. Hynix had run the Eugene plant for about 10 years and employed roughly 1,000 employees and 300 contractors when it closed the plant in 2008.

NTT Acquires 85% Of UK Data Center Service Provider

NTT Communications, a global company headquartered in Tokyo, continued its growth by acquiring an 85% stake in UK-based data center service provider Gyron. Offering colocation, managed services, and related data center solutions, Gyron currently operates a 3-megawatt data center outside of London and is building two more. "Gyron's data centers will strengthen the NTT Com group's cloud-based one-stop ICT [information and communications technology] solutions in the UK," said NTT's press release, "and enable the NTT Com group to further accelerate its offering of increasingly diverse global cloud services."

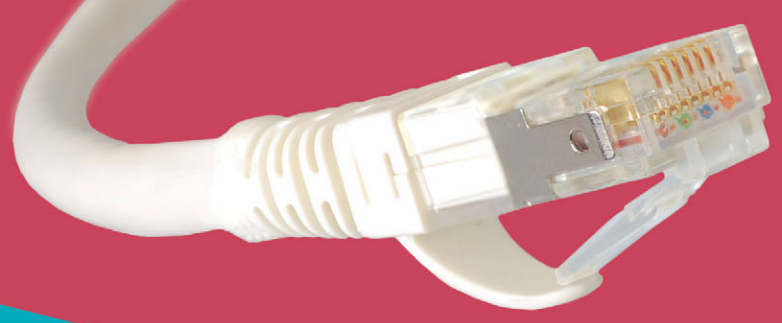
WATCH THE STOCKS

This information provides a quick glimpse of current and historical stock prices and trends for 15 major companies in the technology market.

Company	Symbol	Year Ago	May 24 $	June 7 $	% change from previous issue
AMD	AMD	$7.64	$6.01	$5.76	▼ 4.16%
Apple	AAPL	$331.49	$566.46	$571.72	▲ 0.93%
CA Technologies	CA	$21.98	$25.14	$25.53	▲ 1.55%
Cisco Systems	CSCO	$15.31	$16.48	$16.58	▲ 0.61%
Dell	DELL	$15.67	$12.38	$12.13	▼ 2.02%
Facebook	FB	N/A	$33.03	$26.31	▼ 20.35%
Google	GOOG	$516.73	$601.60	$578.23	▼ 3.88%
HP	HPQ	$35.46	$21.53	$22.06	▲ 2.46%
IBM	IBM	$164.84	$195.07	$194.44	▼ 0.32%
Intel	INTC	$21.76	$25.59	$25.94	▲ 1.37%
LinkedIn	LNKD	$72.01	$96.50	$94.13	▼ 2.46%
Microsoft	MSFT	$23.96	$28.94	$29.23	▲ 1.00%
Oracle	ORCL	$31.63	$26.04	$27.18	▲ 4.38%
Red Hat Software	RHT	$42.49	$52.66	$54.63	▲ 3.74%
Symantec	SYMC	$18.85	$14.88	$14.47	▼ 2.76%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

Datacenter's Weakest Link



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Patch cords are the weakest link in datacenter cabling.
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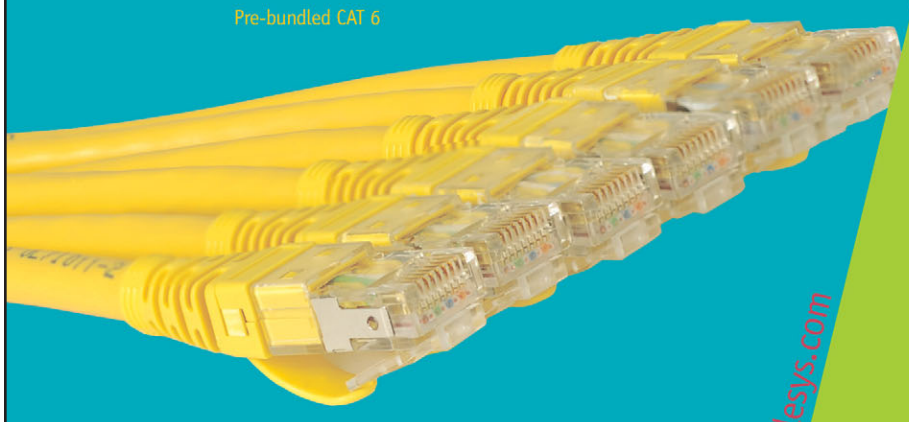

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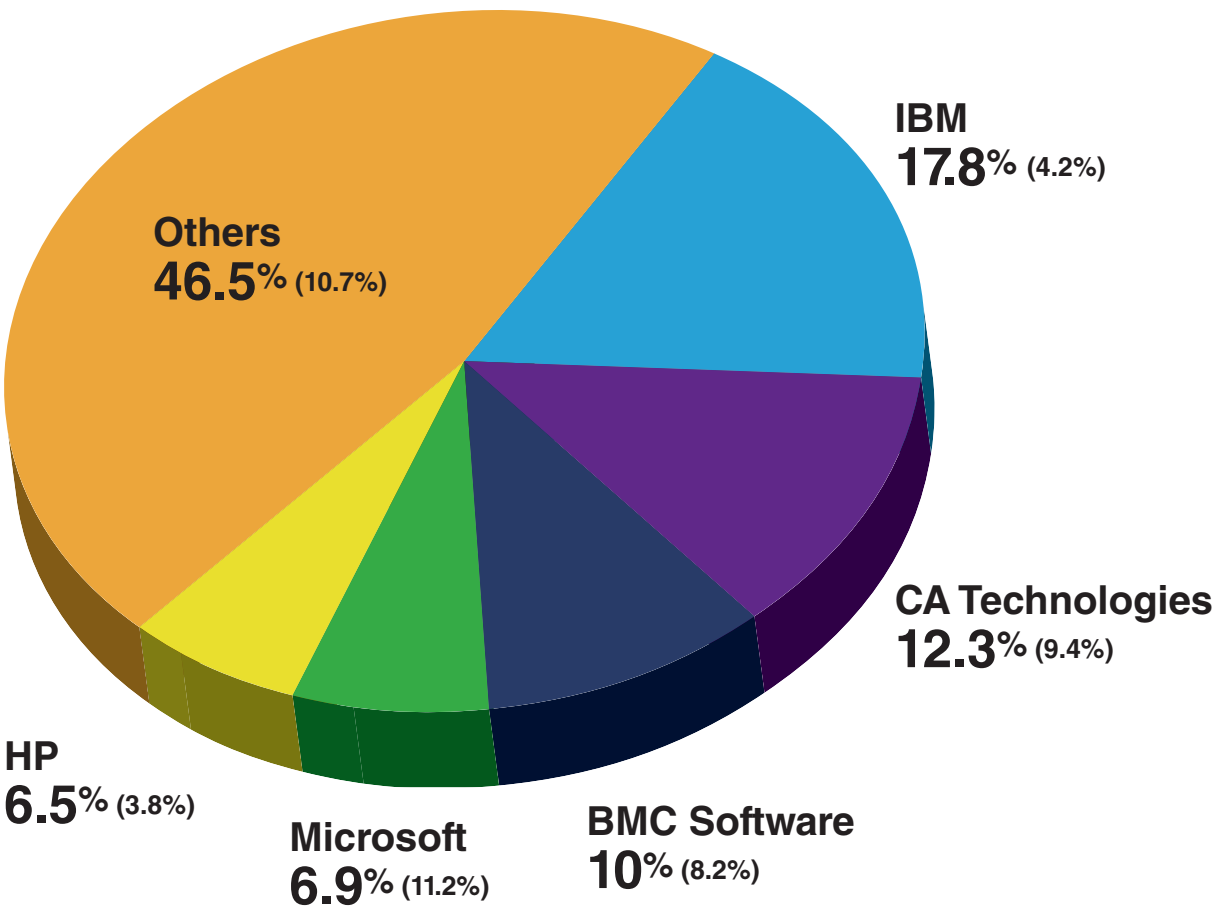
ITOM Software Market Shows Continued Growth

According to the latest research from Gartner about the ITOM (IT operations management) software market, the top-earning vendors have shown continued growth in ITOM for two consecutive years. This chart shows each vendor's percentage of the market share as well as 2010-2011 growth in parenthesis.



IT Concerns Over BYOD

For its "Rethink The Risk" report, BT surveyed more than 2,000 IT decision-makers around the world and identified the top concerns related to the current BYOD (bring your own device) trend, whereby employees are permitted to use their own, often consumer-oriented devices in the workplace. What follows are the percentages of respondents who indicated certain threats as "challenging" or "very challenging."

68% Cybersecurity

68% Preventing data leaked by employees

61% Increasing use of personally owned devices and social media sites

57% Preventing or fixing weaknesses within business systems

57% Security in supply chain systems

53% Industrial or state-sponsored espionage

Researchers Foresee New Cloud Model For Resources

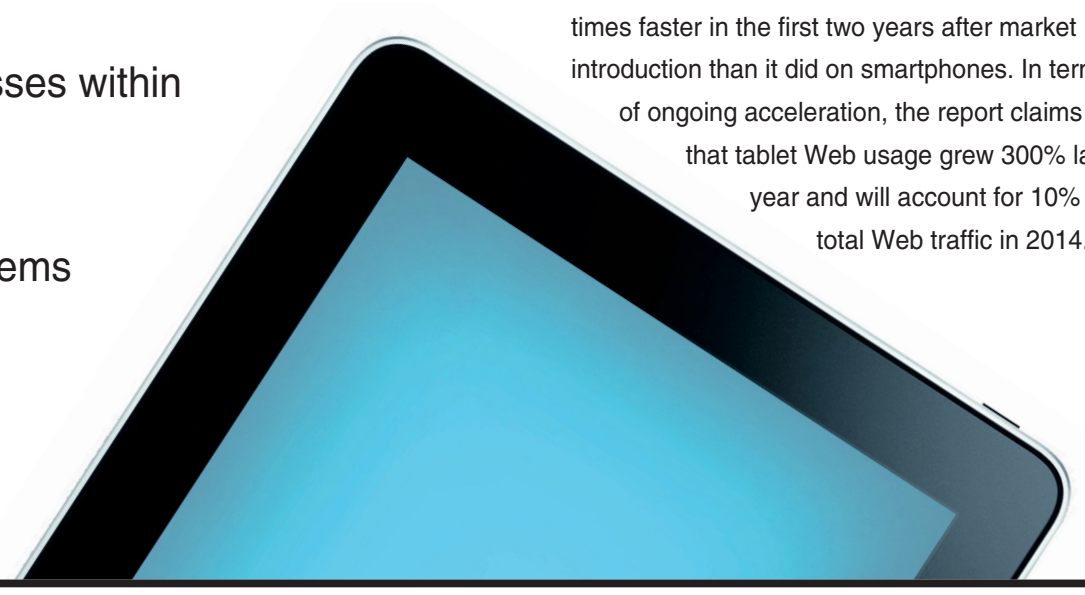
In addition to infrastructure-, software-, platform-, and other "as-a-service" models for delivering some kind of cloud computing, a new model dubbed RaaS (resource as a service) will soon start to gain in popularity, giving customers access to specific computing resources, such as CPU, memory, and I/O resources, for as little as seconds at a time. That's according to researchers Orna Agmon Ben-Yehuda, Muli Ben-Yehuda, Assaf Schuster, and Dan Tsafrir of the Technion—Israel Institute of Technology, who recently presented a paper on the topic. The concept extends from IaaS with the idea that customers will increasingly require specific individual resources on an as-needed basis.

Microsoft Sets A Date For Carbon Neutrality

Microsoft has announced that it will be carbon neutral starting on July 1, which marks the beginning of the company's 2013 fiscal year. Microsoft will establish a price on carbon and use a charge-back model both as a method of ensuring that carbon offsets are used and as an incentive to reduce carbon emissions in general. COO Kevin Turner wrote in a blog post that Microsoft will be carbon neutral in all "direct operations including data centers, software development labs, air travel, and office buildings." Turner cited a "smarter buildings pilot" on the Redmond campus as one of many steps toward greater energy efficiency.

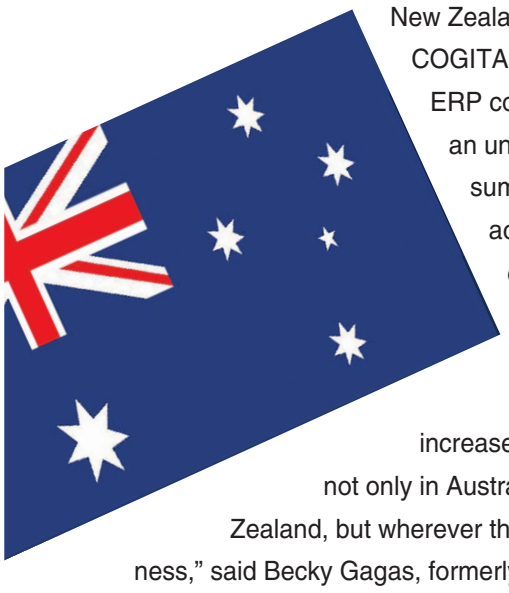
Web Usage Growing Fast On Tablets

According to the most recent Adobe Digital Index report from Adobe Systems, tablet users are browsing the Web in big numbers. Given the larger screen size of tablets relative to smartphones, it makes sense that users would access the Web more frequently on tablets than on smartphones, but the figures separating Web usage on the two devices is striking. According to the report, Web usage on tablets grew 10 times faster in the first two years after market introduction than it did on smartphones. In terms of ongoing acceleration, the report claims that tablet Web usage grew 300% last year and will account for 10% of total Web traffic in 2014.



Epicor To Expand Into New Zealand-Australia Market

Epicor, an ERP (enterprise resource planning) solutions company based in Dublin, Calif., has entered into an agreement to acquire the operating assets of New Zealand-based COGITA, also an ERP company, for an undisclosed sum. "With the acquisition, our customers will now have direct access to increased resources, not only in Australia and New Zealand, but wherever they do business," said Becky Gagas, formerly COGITA director of operations and now Epicor's new director of New Zealand operations, in a statement. COGITA's operations will remain intact as an addition to Epicor.



Google Acquires Mobile Productivity Company Quickoffice

London-based productivity app developer Quickoffice recently announced it had been acquired by Mountain View, Calif.,-based Google for an undisclosed sum. Google often absorbs or rebrands the companies it acquires, but for now, according to Google's official blog post on the matter, Google plans to support Quickoffice's "strong base of users" while it works on "an even more seamless, intuitive, and integrated experience." At press time, only the Quickoffice Pro HD app remained available via online stores; the company's other apps had been removed. Quickoffice works with multiple desktop office suite file types for viewing, editing, creating, and syncing files on mobile devices.

EMC Buys IT Performance Management Company Watch4net

Less than a month after acquiring cloud services company Syncplicity, Hopkinton, Mass.,-based EMC announced it had also acquired another cloud-related company: Watch4net Solutions. Headquartered in Montreal, Watch4net offers IT performance management services for both data center and cloud-based infrastructures, as well as multiple network performance visibility solutions. In a press release, Jay Mastaj, senior VP and GM for EMC's Infrastructure Management Group, said that "insight into every aspect of IT performance and the ability to manage it without growing staff and with increasing granularity, are no longer optional," and Watch4net will help enhance EMC's products in this area.

Oracle Buys Social Marketing Platform Company Virtue

Redwood Shores, Calif.,-based Oracle has entered into an agreement to acquire Virtue. Founded in 2006 and headquartered in Atlanta, Virtue developed its SRM (Social Relationship Management) platform to help organizations use social media outlets strategically, publish content for social marketing purposes, and monitor the success and efficiency of social marketing campaigns. Virtue's platform, "coupled with Oracle's leading sales, service, and commerce products offers a complete social experience solution to our customers," said Thomas Kurian, executive vice president, Oracle Development, in a statement. Terms of the acquisition were not disclosed.

Study Flags Employee Use Of File-Sharing Platforms

In addition to providing some new insights into the trend toward consumerization of the workplace (for example, that 77% of information workers use personal devices for work purposes), a recent SkyDox survey shed some light on a particularly troubling trend: employee use of free file-sharing platforms to store and share company documents. Broken down by sector, the survey found the highest number of file-sharing platform users among those in professional services (87%), finance (84%), and healthcare (57%). Based on job function, however, the survey found the lowest number of users among those doing financial work (39%) and the highest among those with sales (81%) and legal (77%) functions.

Google Wins Copyright Round In France

A French court dismissed a claim of copyright infringement brought by French television broadcaster TF1 against Google over its YouTube service. TF1 had asserted that the presence of its videos on YouTube constituted copyright infringement, but the French court decided that YouTube is a hosting service and that it is not responsible for what its customers post as long as YouTube provides a system for removing content that is reported to be copyrighted. Google itself has posted no TF1 videos on YouTube, although TF1 has through YouTube's Content ID system.

Major Growth Expected In Mobile Payment Tech

Researchers with Berg Insight have pointed out the enormous growth in 2011 of NFC (Near Field Technology) POS terminals as a strong indicator that NFC-based mobile payment services are preparing to go mainstream. NFC is a short-range wireless technology that has so far been closely tied with mobile payment systems. According to Berg Insight, NFC-ready POS terminal shipments doubled to about 2.5 million units internationally last year. The research firm forecasts that 43.4 million units will ship in 2017, and that in 2017 NFC capabilities will be found in 86% of POS terminals in North America.

Text Messaging To Retain Its Popularity Despite Apps

Need to message someone? There isn't just an app for that, there are loads of apps for that. However, most people are opting to use SMS (short message service, aka text messaging) instead of turning to an app. Further, according to new research from Informa Telecoms & Media, SMS is likely to remain more popular than messaging apps for the next five years. Informa forecasts that there will be 9.4 trillion SMS messages sent in 2016 compared to the 5.9 trillion that were sent in 2011. Informa says OTT (over-the-top) messaging such as IP messaging apps will grow dramatically, too, but will not surpass SMS.

PHOTO LISTINGS

The *Processor* Photo Listings section includes brief overviews of data center products.

All products listed have been released recently, so use this section to get up to date with what's new on the market and to find products you need.

Manufacturers:
Do you have a new product that data center/IT managers would be interested in learning about?
Send your press release or product information to press@processor.com.

eRacks/NAS50

The eRacks/NAS50 is a network attached storage file server with the capacity to house 150TB of data. These servers are fully customizable to fit your business needs.

- Can be fitted with both SAS or SATA hard drives and support fast SATAIII for 6Gbps transfers
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Compu-Aire Inc. In Row System Ayan Nano

The Compu-Aire Inc. Ayan Nano In Row Unit is designed to create an efficient and modern cooling system without sacrificing space and specifications. This unit has been designed to be green friendly, by using a high efficiency scroll compressor with EC fans, making it the latest innovation for your cooling needs. This unit has been designed to provide cooling in a horizontal direction, creating a new way to position the unit. The unit can be positioned between the racks, creating a more even dissipation of extreme heat from the servers.

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Methode - Data Solutions Group
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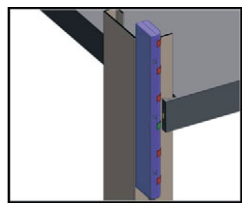

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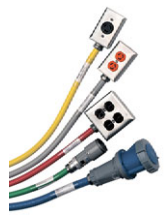

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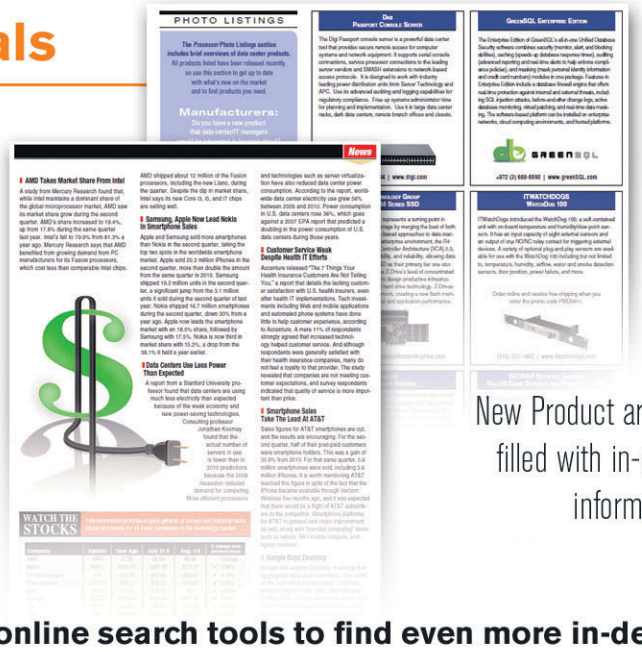

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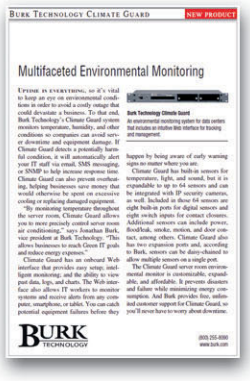

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FEATURED PRODUCT

A Whole New Level Of Storage

Aberdeen's Petarack Offers More Than A Full Petabyte Of Fast, Flexible & Secure Storage

For most SMBs and enterprises, there is an ever-changing target for total storage capacity. It used to be that a few terabytes would be enough, but with technology evolving faster than ever before, there is always room for additional storage. Aberdeen saw this need for almost unlimited storage and is attempting to fulfill it with its new Petarack storage solution, complete with a total capacity of 1,080TB, or 1 petabyte. But the company knew it couldn't hastily design its product and ship it out to market before it was ready, so it took ample time to find the perfect balance of storage and data protection features.

"Putting a petabyte together and actually making it work was a challenge," says Niso Levitas, manager of research and development at Aberdeen (www.aberdeeninc.com). "To my knowledge, no regular OS can recognize and serve that amount of storage securely and no hardware RAID controller can combine more than 32 drives as a single array. We started with a no-limit ZFS file system, which was the only one that could protect all this data and present it outside the box at an incredible speed. It took eight months and a team of engineers to deliver a product we could be proud of."

Customers Inspiring Innovation

At Aberdeen, innovation always starts with the needs of the customer, so the company set out to find the most important features customers were looking for and combine them into one solution. "Our customers loved our Linux NAS and Windows NAS products but demanded more sophisticated shared or block-level storage with enterprise features, such as unlimited snapshots and volume mirroring," Levitas says. "They wanted to be able to share more than 64TB of storage, which was the single array limit, as well as have file system flexibility, server houses, video houses, and shared storage with native file systems."

Aberdeen understood the frustration of customers that needed high-capacity storage solutions that wouldn't skimp on speed but also wouldn't break a business budget. Through extensive research and development, the company was able to give customers everything they wanted, including more than a full petabyte of storage, for only $495,000.

High-Capacity Storage & High-Speed Performance

With the Petarack, it all starts with capacity. To reach the large capacity goal of 1PB, Aberdeen's solution comprises eight JBODs, each with 45 SAS drives holding 3TB of storage apiece. With a total of 360 drives, the Petarack provides 1,080TB of storage. One of the most beneficial features of the product is how much data center room it saves, because all of this storage is available in a single 42U rack. This gives you enough space in your data center to hold multiple Petarack configurations or to simply fit it in to your existing server and storage environment.

When designing the Petarack, Aberdeen not only set out to reach the highest storage capacity, but also some of the highest network and transfer speeds possible for a storage solution. "Petarack can act as a Ferrari or it can pull loads like a big rig, depending on your configuration," Levitas says. "It is configured with Intel® Xeon® Processors, can be configured with up to 192GB of memory and utilize most of it as cache, and it can be configured with enterprise-level SSDs as a second layer of cache for demanding NFS." And Levitas says that Aberdeen is working on accommodating up to a terabyte of memory in the future.

The Petarack comes preconfigured with 10 Gigabit Ethernet, which can be directly connected to backbone network switches. Companies can also choose to add more 10GbE cards or InfiniBand for HPC, according to Levitas. If you prefer Fibre connections, you can install Fibre Channel adapters and use the Petarack for RAW Fibre SAN storage. Even then, there is still room for more performance. "You could fill all the slots in a Petarack with Fibre cards and you wouldn't be able to reach its full potential," Levitas says.

Supported Applications & Environments

Aberdeen designed the Petarack to be used in a variety of industries and environments. But according to Levitas, virtualization and cloud computing are two areas where the Petarack can shine based on sheer capacity. Because Aberdeen's storage solution is scalable, it can be used to support cloud computing environments of different sizes and grow depending on the current needs of the company. Instead of investing in multiple racks and storage solutions, you can simply add more storage or Ethernet cards to increase and improve cloud performance. With virtualization, a petabyte of storage can be used to serve hundreds of virtual desktops, if it is set up and configured correctly, Levitas says.

Levitas also points out that the Petarack is perfect for "video applications and broadcast companies with Mac and Windows editing workstations" as well as for high-performance data clusters with "powerful CPUs and massive amounts of memory configurations." These uses are only the tip of the iceberg, because almost any company that is searching for an ultra-high-capacity storage can take advantage of the Petarack.

Flexibility For The Future

The Petarack is packed with capacity and prepared for even the most demanding storage needs, but perhaps the most important feature of the Petarack is its flexibility. In addition to its standard configuration of 360 drives and 1,080TB of storage, there is even room in the rack to add an additional 45 drives for an extra 135TB with a ninth JBOD. And if you choose to stick with the original configuration, you have plenty of extra space for Ethernet networking cards or host bus adapters to improve speed and performance. Ultimately, the Petarack is designed to fulfill your current needs but is also flexible enough to grow with your company.

"You can start with terabytes of storage and then easily grow it to petabytes," Levitas says. "You can add cards to increase the connectivity and bandwidth, while only incurring the costs of the cards themselves. You can add another Petarack and replicate it onsite or offsite. You won't hit capacity limitations, you have unlimited snapshots, and you can grow the Petarack to your liking. It's a no-limits system." P

Aberdeen Petarack

(800) 500-9526
www.aberdeeninc.com

The Petarack is a high-capacity storage solution that supports a petabyte or more of storage and provides high-speed performance for even the most demanding data centers. The Petarack is also flexible enough to adapt to and grow alongside your company to fulfill all future storage needs.

Data Protection & Downtime Prevention

If you're storing up to a petabyte of data on one system, you'll want to ensure that data is thoroughly protected. That why the Petarack "uses the incredible ZFS file system with copy-on-write technology and an end-to-end checksum method to avoid silent data corruption," according to Niso Levitas, manager of research and development at Aberdeen. On the hardware side of things, Aberdeen has taken measures to help companies avoid downtime and make sure that their massive amount of data is always available to them. "The Petarack has redundant head units so that a complete head unit or other component failure will not affect productivity," Levitas says.

> "Putting a petabyte together and actually making it work was a challenge. To my knowledge, no regular OS can recognize and serve that amount of storage securely and no hardware RAID controller can combine more than 32 drives as a single array."
>
> *- Aberdeen's Niso Levitas*

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PRODUCT SPOTLIGHT

Data Center Cooling

MovinCool CM12 & CM25

The MovinCool CM12 and CM25 are ceiling-mounted air conditioners that are just 15.5 inches (CM12) and 20 inches (CM25) tall, making them compact enough to fit above a drop ceiling for spot cooling space-limited installations and server rooms. The units free up valuable floor space and feature built-in flanges and mounting brackets. The CM25 features a wall-mounted electronic controller that lets users monitor and troubleshoot problems.

- The CM12 provides 10,500 BTU/hr of cool air at 80 degrees Fahrenheit at 50% RH and operates on a standard 115V power source
- The CM25 provides 25,000 BTU/hr of cool air at 80 F at 50% RH and operates on a 208/230V power source
- Can fit into tight ceiling spaces, freeing up floor space

Best For: Space-limited equipment rooms and cramped server and telecom closets.

Price: $2,895 (CM12), $6,995 (CM25)

Contact: (800) 264-9573
www.movincool.com/dealer.php

MovinCool CMW30

The MovinCool CMW30 water-cooled model is ideal for applications where an air-cooled unit cannot be used because there is no available space for hot exhaust air. The CMW30 comes standard with a wall-mount controller that offers advanced communications, monitoring, self-diagnostic, and troubleshooting capabilities. It can fit into virtually any drop-ceiling space and doesn't require refrigerant connections or outside condensing units.

- 29,400 BTU/hr total cooling capacity
- High sensible cooling—ideal for server rooms
- Environmentally friendly design—7 IEER, R-410A refrigerant, and RoHS compliant
- Maximum sound level of only 55 dB(A)—5 decibels lower than a normal conversation

Best For: Server rooms and other applications with dense heat loads.

Price: $7,495

Contact: (800) 264-9573
www.movincool.com/dealer.php

MovinCool Office Pro W20

The latest addition to MovinCool's portable air conditioners, the Office Pro W20 has an impressive 15,700 BTU/hr cooling capacity. Because the unit is watercooled, customers need not worry about locating the Office Pro W20 in areas without local hot air exhaust: The unit simply requires a water supply and a standard 115V outlet.

- Programmable digital controller enables weekend and after-hours cooling
- UL listed for safe operation
- Accepts a wide water supply temperature range (40 to 90 F) and a minimum water pressure of only 12 pounds per square inch
- Connects to a fire alarm system to allow emergency shutdown

Best For: Office spaces and IT equipment rooms where hot air exhaust is not available.

Price: $4,375

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www.movincool.com/dealer.php

Rackmount Solutions' CRUXIAL COOLER™

The Cruxial Cooler™ series of A/C Rackmount server racks have been preventing IT hot spots and contamination from dirty environments for over 8 years. Built to NEMA 12 standards, these racks work equally well in a data center, warehouse, manufacturing area or any environment where the ambient temperature is too warm to sustain the heat generated by hot IT equipment.

- 4,000 BTU to 20,000 BTU models
- Sidemount or Rackmount, depending on the best configuration and aesthetics required
- Each unit includes external LED temperature monitor with (2) sensor leads built into the front door
- 36" and 42"d cabinets
- 42U, 45U, 48U, or custom as needed
- Ship next day on some configurations
- Made in the USA

Best For: Areas where room temperature is warm or when AC is occasionally turned off. Dirty or warehouse environments requiring NEMA 12 dust, water, debris, and lint equipment protection.

Price: Full size 42U units start at $4,918

Contact: (800) 207-6631 | www.rackmountsolutions.net

MovinCool Office Pro 60 & 63 sold by Rackmount Solutions

The MovinCool Office Pro 60 and 63 deliver up to 60,000 BTU/hr of cooling capacity. These portable air conditioners are designed to manage temperatures for computer networks, communications equipment, and office electronics. The self-contained Office Pro 60 and 63 are easy to install—just position the wheeled unit, plug it in, and turn it on.

- Programmable digital controller enables weekend and after-hours cooling
- Office Pro 60 operates on a 220V power source; Office Pro 63 uses 460V
- Provides cooling in the low 60s to maximize the life span of heat-sensitive electronics
- Condensation pump included for uninterrupted operation
- UL Listed for safe operation

Best For: Large office spaces and computer rooms filled with heat-sensitive electronics.

Price: $9,995 (Office Pro 60); $12,495 (Office Pro 63)

Contact: (866) 207-6631 | www.rackmountsolutions.net

AmeriCool, Inc. WPC-4000

Portable air conditioners from AmeriCool are a great solution for most heat related applications. Our portable units can handle everything from mission critical to harsh industrial environments. These units can also be used to dehumidify and are very effective in drying out water damaged buildings.

- Highest capacity at 115V (16,800 BTU/hr)
- Removable nozzles with integrated grill
- 12" flange included
- Operating range: 64-104 deg
- Spot cool and room cool modes available

Best For: AmeriCool portable air conditioners have many commercial and industrial applications including; server rooms, hospitals, laboratories, process cooling, multi workstation cooling, special events and much more.

Price: $3,595

Contact: (800) 680-0725 | www.americoolinc.com/products/

PRODUCT SPOTLIGHT

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

In Row System Ayan Nano

The Compu-Aire Inc. Ayan Nano In Row Unit is the latest addition to the Ayan series. The Ayan Nano is designed to create an efficient and modern cooling system, without sacrificing space and specifications. This unit has been designed to be green friendly, by using a high efficiency scroll compressor with EC fans, making it the latest innovation for the customer's specific cooling needs. This unit has been designed to provide cooling in a horizontal direction, creating a new way to position the unit. The individual unit can be positioned between the racks, creating a more even dissipation of extreme heat from the servers.

- Scroll compressor
- High pressure and low pressure switches
- Condenser coil
- Sight glass
- Filter/dryer

Best For: Supplemental cooling, industrial process control centers, and many sensitive electronic applications.

Contact: (562) 945-8971 | www.compu-aire.com

Liebert System 3 sold by Critical Power Exchange

The Refurbished Liebert Deluxe System 3 offers high energy efficiency, a modular frame, front service access, and compressor options. This system provides precise, reliable control of room temperature, humidity and airflow for proper operation of critical electronic equipment. Redundant critical components, such as compressors, blowers and motors, contribute to system reliability. Refurbished equipment is highly reliable, provides a substantial cost savings and allows often scarce and valuable capital to be used for other important purposes.

- Model DH245AUAGES year 2008
- 20 ton Downflow
- 460 vlt

Best For: Data centers, telecommunications facilities, industrial process control centers, laboratories and other sensitive electronic applications

Price: $19,000 Refurbished, 1 Year Parts Warranty

Contact: (800) 216-4993 | www.criticalpower.com

Uptime Racks ECC13 Air-Conditioned Computer Cabinet

Uptime Racks ECC13 efficiently cools IT equipment by bringing the cooling directly to the heat source. The ECC13 directs cold air to the front of the cabinet, ensuring that valuable servers remain cool. Uptime Racks provides primary, supplemental, or backup cooling to any environment.

- High cooling capacity: 13,000 BTU/hr at 115V
- Cabinet cooling powered by MovinCool
- 32U of available rack space
- Environmental monitoring
- Cold aisle/hot aisle configuration
- Plug-and-play installation

Best For: Small server rooms or hot spots within larger data centers.

Contact: (303) 908-8043 | www.uptimeracks.com

Black Box Elite™ Cold Aisle Containment System

Use the Elite Cold Aisle Containment System from Black Box to increase cooling efficiency in the data center. With this kit, you can shut off the aisle ends to contain cool air. You'll also create a more efficient cold aisle by reducing air recirculation. The system is exceptionally effective at reducing energy costs, lowering power bills, and increasing cooling capacity.

• Concentrates cool air where it's needed—at the front of equipment.
• Reduce energy costs and increases cooling efficiency.
• Convenient, professional-looking doors seal cold aisles.
• Choose from 42U or 45U high units.

Best For: Data centers of any size interested in increasing their cooling capacity.

Price: $1,379 for a 42U unit

Contact: (888) 433-5049
www.blackbox.com/go/ColdAisle

Black Box ClimateCab™

ClimateCab cabinets from Black Box save energy and money by cooling only the cabinet rather than a whole room or IT center. They feature air-conditioning units that keep equipment cool even with room temperatures up to 130° F. Whether you need to house multiple servers, a PC workstation, or a small amount of rackmount equipment, ClimateCab is the solution to keep everything cool.

- Install equipment without the need for additional cooling or costly infrastructure.
- NEMA 12-rated for protection against dirt, dust, lint, debris, and splashing liquids.
- Locks to protect equipment from tampering.
- Choose from server, data, and wallmount models.

Best For: Housing network equipment outside the protection of a climate-controlled data centers in areas such as factory floors, remote sites, and industrial environments.

Price: Starts at $2,695.95

Contact: (888) 433-5049
www.blackbox.com/go/ClimateCab

Black Box Cold Front™ Passive Liquid Cooling

Black Box's Cold Front data center cooling solution can cut power and cooling costs up to 50%. Cold Front consists of Heat-Transfer Doors and a Coolant Management System. It supports five times the computing power of air-cooled facilities and requires no rearrangement of enclosures. Cold Front returns cooled air into the data center and eliminates the need for hot-aisle/cold-aisle configurations.

- Neutralizes cabinet heat at the source with Heat-Transfer Doors.
- Installs right on existing cabinets.
- Doors have no moving parts for reliable operation with virtually no maintenance.
- Supports five times the computing power of air-cooled facilities.
- Cuts power and cooling costs by 50%.

Best For: Companies of all sizes looking for high-efficiency cooling to save on energy costs. Ideal for new installations and retrofits.

Contact: (888) 433-5049 | www.blackbox.com/go/ColdFront

PRODUCT SPOTLIGHT

BUYING TIPS:

Data Center Cooling

FOR DATA CENTER PROFESSIONALS, cooling is as vital a concern as storage capacity and security: Data centers run more efficiently and reliably with the proper temperature, and uptime is everything. Portable cooling options can make a big difference in a temperature-strained environment because of their set-and-forget programmability, built-in automation, and modular and mobile form factors, while more permanent solutions can offer reliable cooling and efficiency. With that in mind, there are several tips and key industry trends you need to be aware of before you purchase cooling equipment.

Consider your current hardware and capacity needs. To make the appropriate cooling purchases, decision makers need to consider their current hardware and capacity needs and provide enough scalability to grow with the organization's future data needs. Gina Dickson, product manager at Black Box Network Services (www.blackbox.com), says the primary concern for any organization is how many BTUs it needs to keep equipment at the appropriate temperature. If you go significantly over capacity, then efficiency suffers; too little capacity, and the cooling equipment won't be able to keep up.

Open or closed loop? Another major consideration with cooling equipment is whether to select an open- or closed-loop system. Open-loop cooling systems utilize a liquid coolant such as water that is exposed to air and the environment. They tend to have a lower initial cost but also require more frequent maintenance and water treatment, and they suffer from reduced efficiency compared to closed-loop systems. A cooling system that utilizes an air- and environment-isolated liquid coolant is commonly referred to as a closed-loop system. Closed-loop systems tend to have a higher initial cost but require less maintenance and provide better cooling efficiency compared to open-loop systems.

Know where the equipment will be used. Consider where the cooling equipment will be operated. Eddie Stevenson, MovinCool marketing manager, suggests analyzing the server room, calculating the heat load, and taking into account all factors that could potentially change your cooling needs, such as, "the number of watts being outputted, if it's facing a window, and any factors that could escalate the heat in that room."

Look for dependable units. Dependability should be top-of-mind. "You want to look at the quality of the manufacturer and choose a product from a manufacturer that has been around for a long time," Stevenson says. He advises enterprises to consider the following: "Are they housing fan motors correctly? Are they welding the casters? With portable units, they get moved around a lot, so make sure they will stand up moving from location to location over time."

Consider alternative cooling methods. Steve Branton, director of marketing at Asetek (www.asetek.com), recommends investigating alternative types of cooling, such as those that use liquid technology. "A lot of the talk I see about liquid cooling in data centers is really moving liquid-cooled CRAC units from the periphery (outer walls) of the data center closer and closer to the servers," he says. "In-row, rear-door, and some of the top-of-rack coolers are great examples of getting the CRAC units off the walls and closer to the servers." He also suggests using cooling systems that focus liquid cooling on the hottest components (highest heat flux) in the systems, such as CPUs and GPUs, rather than using the liquid to cool air that in turn cools the server.

BUYERS' CHECKLIST

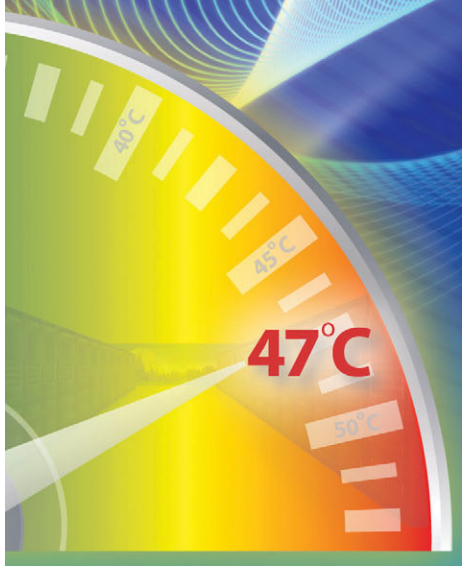
- ✔ How many BTUs do you need to keep your equipment at the appropriate temperature?
- ✔ Do you need a closed- or open-loop system?
- ✔ Where will the cooling equipment be located?
- ✔ How much of a concern is noise output?
- ✔ Commercial-grade equipment offers superior reliability and durability.

KEY TERMS

BTU (British Thermal Units).
Used to measure the amount of energy required to heat a liquid such as water. A single BTU represents enough energy to raise the temperature of one pound of water by one degree Fahrenheit at a constant pressure of one atmosphere. In the context of cooling equipment, BTUs are listed as a given rating per hour.

Closed loop.
A cooling system that utilizes a liquid coolant that is isolated from air and the environment.

Open loop.
A cooling system that utilizes a liquid coolant that is exposed to air and the environment.



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SYS-F617R2 Series
2.5" HDDs
4U, 8 Nodes

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- File system and Storage Server
- Virtualization
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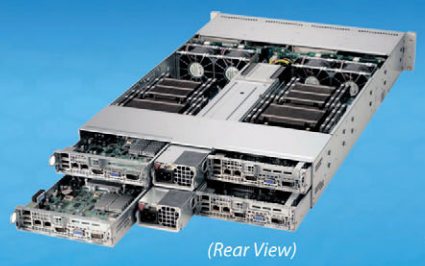
(Rear View)



(Rear View)

(Front View)

2U Twin²®
SYS-6027TR-H Series
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PRODUCT SPOTLIGHT

Backup & Disaster Recovery

eProvided Data Recovery

eProvided offers several types of data recovery services for enterprises that have been unable to recover lost data on their own. Whether on a USB or flash drive, hard disk drive, NAND, SSD, or DVD or CD, eProvided will help to recover your lost data or images. Lost data can be recovered in about 95% of the cases eProvided works with, including corrupted files, damaged drives, overwritten data, deleted data, and more.

- Send devices directly to eProvided labs with short turn-around time
- Offers USB device and microchip repair
- Will work with any type of drive
- High success rate with any type of symptom, including corrupted or deleted files, virus, flood, and fire damage

Best For: Enterprises with lost, corrupted, or deleted files that would like to recover such data in a cost-efficient and timely manner.

Contact: (866) 857-5950 | www.eprovided.com

Doyenz rCloud Services

rCloud recovery service from Doyenz protects both physical and virtual assets. rCloud offers 15 minute recovery of VMware ESX environments with virtual failover when disaster strikes. Through the online portal of rCloud you can access server images anytime, anywhere.

- Protect and replicate servers in rCloud
- Recovery for VMware ESX/ESXi environments in the cloud in less than 15 minutes
- Virtual failover in the cloud in minutes instead of hours or days
- With rCloud Virtual Lab, prevent downtime and proactively prepare for disasters before they strike
- Online portal allows you to verify the status of your server backups, agents, and production servers

Best For: Small to midsized enterprises looking for a hands-on approach to data recovery priced for any budget.

Contact: (877) 341-7342 | www.doyenz.com

General System Dynamics Data Manager™ Service

General System Dynamics (GSD) offers the only comprehensive software and services solution for legal holds of backup data for eDiscovery and litigation support. GSD provides audits of backup systems and thorough assessments to ensure complete data protection coverage for corporations, legal service providers, law firms, and consultants. Data Manager™ is the first enterprise class platform to offer comprehensive capabilities of data preservation and legal hold execution for early case assessments, legal hold management, analysis and review, and collection and culling of backup specific data.

- Integrated workflow within a single application at the lowest cost makes GSD's software the perfect compliment to your current case management and legal hold system
- Offers the ability to preserve documents and emails distributed throughout the enterprise's data backup system within the data center

Best For: Corporations, legal service providers and law firms looking to significantly reduce their electronic discovery costs, risk, time and workload.

Contact: (312) 380-6043 | www.gsysd.com

Graham Magnetics

Founded in 1966, Graham Magnetics is a Graham, Texas,-based provider of high-quality, high-performance tape media storage products, including certified backup media, disk backup solutions, and cloud backup storage solutions. The company places an emphasis on providing green solutions for complete data backup, with products and services designed to maximize data center performance and productivity. In addition to backup solutions, it also offers security products such as firewalls and cabling systems for networks.

- Provides long-term physical storage for tapes, hard drives, and hard copy documents
- Cloud backup solutions include hosted business continuity and disaster recovery solutions
- Offers data services such as data recovery, eradication, destruction, and redeployment
- Other solutions include asset recovery, unified threat management, data loss prevention, and VPNs

Best For: Companies looking for a one-stop shop for data backup and recovery with an emphasis on security and environmental friendliness.

Contact: (678) 216-0555 | www.grahammagnetics.com

Idealstor Bantam

The Idealstor Bantam is a removable disk backup system that combines the best of disk and tape by using 2.5-inch SATA disks as backup media, which can then be sent offsite for storage and disaster recovery. The Bantam is priced for SME budgets but has features that meet the needs of larger enterprises, as well. The system features data transfer rates of up to 480MBps and is bundled with iBac Data Protection Software from Idealstor.

- Complete backup system offering up to 1TB of removable disk capacity
- Disk capacities of 320GB, 500GB, 750GB, and 1TB currently available
- Includes iBac 5.0 for native format backup and drag-and-drop restore with data deduplication
- Bantam cartridges are housed in a rugged aluminum frame and are shock-proofed

Best For: Replacing tape backup with a faster, larger, and more reliable backup media.

Contact: (888) 269-7349 | www.idealstor.com

Spectra Logic Midrange T-Series Tape Libraries

Spectra Logic's T200, T380, and T680 LTO tape libraries are designed to help data centers manage unpredictable growth. Built on the company's Tran-Scale architecture, the tape libraries feature interchangeable components that make scaling up easier. With future support of LTO-6 technology and more than 5PB of capacity, the tape libraries also feature free encryption key management; media, drive, and library health monitoring; and partitioning and remote management.

- Management via Web browser for easy operation
- Built-in BlueScale AES 256-bit encryption and key management
- Monitors its own drives, power supplies, controller, and robotics
- Media Lifecycle Management and Certified Media tools detect media errors before they happen
- Provides investment protection with seamless upgrade programs between LTO generations.

Best For: Midrange data centers.

Contact: (800) 833-1132 | www.spectralogic.com

PRODUCT SPOTLIGHT

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

TOLIS Group bruAPP™

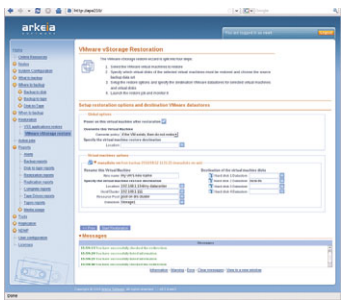
TOLIS Group's bruAPP backup appliance resolves the issues of configuration, installation, and compatibility faced when implementing a networked system backup strategy. Proven reliability, cost-effectiveness, scalability, and client system software agents available for all modern operating systems are delivered without the requirement for heavily experienced system/network administrative personnel. Tightly integrated hardware components and the venerable BRU Server™ software provide backup and restore services independent of any server on the network, including virtualized environments. 1U to 7U models (4U/7U chassis stackable to support growth) are available to provide D2T, D2D, and D2D2T services; up to 132TB of net RAID-6 stage capacity in an 8U chassis, and LTO tape technology options are available: up to 4-drive/96 slot libraries.

- Enterprise-grade client/server backup services
- Windows, Linux, and Mac OS X management consoles
- Plug-and-play installation and intuitive operation
- Totally self-contained using server-grade components

Best For: bruAPP scales from small office - to corporate departments - to the enterprise.

Contact: (480) 505-0488 | www.tolisgroup.com

Arkeia vStorage Virtual Appliance



Arkeia's vStorage Virtual Appliance is a comprehensive backup and recovery tool for VMware vSphere 4 platforms and VMware Infrastructure 3. The virtual appliance includes Arkeia vStorage Backup Agent and can be rapidly deployed in and be used to back up any vSphere hypervisor. Arkeia vStorage Backup Agent enables local and over-the-network backups to disk, tape, or to disk and then tape, and backup sets can be replicated locally or over a WAN.

- Management through Arkeia's Web-based interface
- VMware CBT (Changed Block Training)
- vCenter integration, vApp support, and RDM (Raw Device Mapping)
- Enables full, incremental, and differential backups
- Includes one year of maintenance

Best For: VMware vSphere environments.

Contact: (760) 431-1319 | www.arkeia.com

STORServer Backup Appliance

The STORServer Backup Appliance integrates backup, archive, and disaster recovery into a single, integrated solution that includes industry-leading hardware, intuitive backup software, and robust data protection technology. Appliances are scalable, enterprise-wide solutions that support many OS, email, and database platforms; various network connections (NAS, SAN, LAN, WAN); and hundreds of storage devices. With STORServer's online browsing tool, Instant Quote, IT managers and administrators can quickly and easily evaluate pricing, components, and standard features of three STORServer Backup Appliances.

- Centralized management
- Support for most OS, email and database platforms
- Disk-to-disk OR disk-to-tape
- NAS, SAN, LAN, WAN friendly
- Quick to install and easy to learn and use
- Virtual Machine Backup agent option

Best For: Midmarket organizations in need of an enterprise-class solution that can be managed in just minutes a day.

Contact: (800) 550-5121 | www.storserver.com

RockyNet Offsite Backup Servers

RockyNet
SAS-70 & HIPAA
Compliant Data Center

Don't risk losing data. With RockyNet offsite backup servers, we can sync a server at your location to one at our SSAE-16 facility. RockyNet helps set up your server and verifies data is copied to a server at our location. If a disaster were to occur at your site, you could still have remote access to your data, and your business could continue to function until your server was restored.

- Rest assured as your data is stored in a facility with UPS/Generator power, N+1 Cooling, multiple GigE ports, and static-free raised flooring
- 24/7/365 onsite support
- Expert staff with the knowledge and experience necessary to guide you to your goals

Best For: Companies looking to incorporate offsite backup into their disaster recovery plans.

Contact: (303) 541-1555 | www.rockynet.com

Do you have a **NEW PRODUCT** that data center/IT managers would be interested in learning about?

Send your press release or related product information to press@processor.com.

PRODUCT SPOTLIGHT

Buying Tips:

Backup & Disaster Recovery

"Failing to do backups on a regular basis." It tops a list of 11 common backup mistakes compiled by the Tolis Group. As the Tolis Group states, "doing regular data backups is like brushing your teeth. It's not fun or exciting, but you must do it if you want to keep your data (or your teeth) safe." When choosing a data backup solution, here are some considerations to ponder.

Must-Haves

Key features to seek in backup solutions include reliability (best bit error rate), ease of use, scalability, offsite capability (removable media), security (built-in encryption), and the performance needed to meet backup windows and execute recovery strategies, says Kent Dinkel, Spectra Logic senior director of product management (www.spectralogic.com).

Paul Mako, president of RockyNet (www.rockynet.com), agrees, adding that a solution's flexibility to match the enterprise's bandwidth capabilities, including incremental and locally cached backups running during non-business hours, is also important.

Acquiring an affordable solution that doesn't sacrifice quality, Dinkel says, means looking at the big picture. This includes considering power and floor space and other environmental factors, resources needed to operate the solution, upgrade costs, lifespan expectancy, and ease of scalability.

Mako says it's also important to ask how your business might increase profitability and productivity using cloud services along with building out backup strategies. For instance, increasing pipe size, utilizing desktop cloud services, and interconnecting multiple sites via virtual servers and desktops can increase the bottom line, he says. Though not the least expensive option available, he says, this can provide a high return on investment.

Brian Greenberg, CEO of General System Dynamics (www.gsysd.com), believes the best backup solution is one that's business-driven. Beyond taking an inventory of regulatory compliance issues you face, he says, use a BIA (business impact assessment) to spell out how data loss due to disaster of any size will impact the company. A BIA can also help produce an RTO (recovery time objective; how long it will take to recover data) and RPO (recovery point objective; how much data since the last backup you can afford to lose). "Only after that process does it make sense to look at features such as continuous data protection or de-duplication," he says.

Vendor Considerations

When sizing up vendors, consider their qualifications and expertise at protecting data, innovation track record, long-term stability, ability to share technical resources, customer and professional services, and multisite and highly redundant solutions. Also ensure 24/7/365 technical support is available, Dinkel says, as backups typically occur during non-business hours. Other tech support considerations include the vendor's local presence, onsite support, response times, spare parts stored onsite, and system monitoring with predictive analytics.

Mako says tech support is big factor in current cloud services and one reason smaller, managed, private clouds are actually better than "big, ubiquitous, anonymous cloud providers that sometimes do not even offer a support number on their Web sites." Determine the exact level of support included in plans, he says, as "big companies can charge up to $200 per hour if you do not subscribe to their premium package."

Greenberg says you'll also want to get to know your account executive, "test" the tech support team to ensure they aren't just employees working from a script, and practice restores and recovery scenarios. If considering cloud or other managed service solutions, he says, understand the service level the provider has agreed to in the SLA (the more service required, the more you'll pay) and what the regulatory and business requirements are for protecting data and ensure that's reflected in the SLA.

Don't Overlook These Essentials

Creating a recovery plan and testing it is the most overlooked aspect of backup and recovery, Dinkel says. Other areas often overlooked include planning for growth of backup system, power, cooling, and floor space requirements; offsite retention abilities; and encryption and other data protection. Mako says enterprises must also understand how the speed at their location affects their backup. For example, he says, don't expect to back up 1TB of data overnight with 1.5Mbps. P

Buyers' Checklist

- ✔ Determine how much data must you back up and how often.
- ✔ Determine your backup budget.
- ✔ Determine whether offsite copies are required.
- ✔ Create a data recovery plan.
- ✔ Forecast data growth five years out.
- ✔ Ensure scalability, flexibility, and tech support when needed.
- ✔ Seek vendor references from similar businesses.

Key Terms

Full backup.
Backs up every file, even if it hasn't changed since the last backup; typically more costly and time consuming.

Incremental backup.
Only backs up files that have changed since the last backup; typically more cost-effective.

The Pinnacle of Enterprise Class Storage

*Available in Full Length and ¾ Length PCIe Form Factors

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Designed for today's enterprise environments including cloud computing and data centers

- Highest performing enterprise PCIe solution on the market
- Bootable as direct-attach device
- Up to 6,000 MB/s transfer rates
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- Merges the best features of pure hardware and software solutions with OCZ's integrated Virtualized Controller Architecture™ (VCA) 2.0 and OCZ's VXL virtual accelerator
- Ultra-high endurance (increase drive life by more than 5x the rated P/E cycles of the NAND)
- Only PCIe solution with complete power fail protection & drive-level recovery
- Lowest CPU and memory resource utilization in its class
- Available in 300GB - 16TB

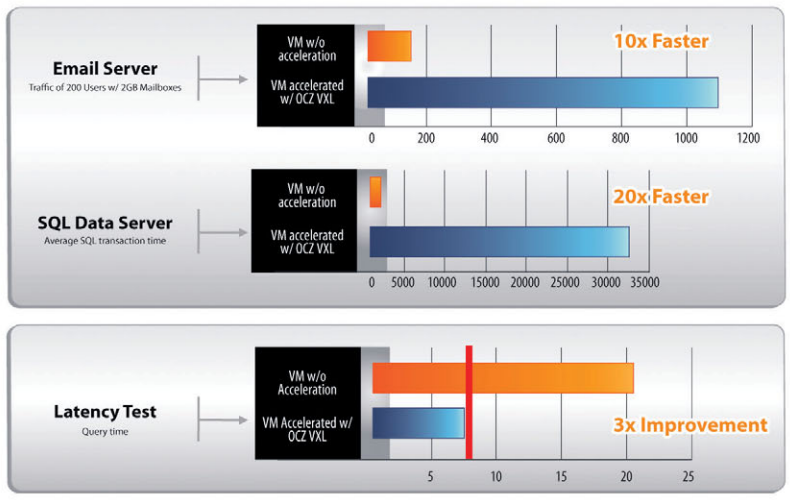
VXL Enterprise Storage Accelerator

Better Technology. **Greener** Data Centers. **Lower** TCO. **Higher** ROI.

OCZ's VXL enterprise storage accelerator is a complete software solution that optimizes flash-based caching and virtualization technology. OCZ VXL software, in conjunction with OCZ's Z-Drive R4 Series of PCIe based Solid-State Drives (SSDs), dramatically accelerates data access and delivery for I/O-hungry Virtual Machines (VMs).

OCZ VXL brings virtualization to life and transforms data centers by delivering:

- Significantly higher performance
- Much lower latency
- Complete flexibility and all benefits of virtualization without any limitations
- Higher utilization of virtualized servers leading to less number of servers
- Lower IT data center power requirements
- Ability to use cost-effective commodity hardware



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4U Modular Server-RM41772/36

Maximum Configuration Flexibility

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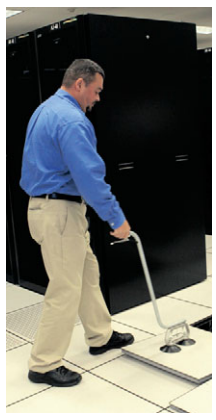
PRODUCT SPOTLIGHT

Data Center Flooring & Accessories

FirstTech E-Z Lift Access Floor Panel Lifter



Anyone who's ever had to use a regular floor-lifter tool will appreciate the convenience of the E-Z Lift. No more back strain from bending over and lifting heavy tiles with only your hand for support. Simply drop the E-Z Lift floor lifter tool with its dual suction cups on the appropriate tile, tilt the tool towards you, and pull. It's just that easy. The long handle on the unit allows you to stand and control the lifter as if it were a simple cane or even a golf club.

- Heavy-duty five-inch double suction cup
- Mount has a bright red background (sold separately), making it easy to see in the event of an emergency or other time of need
- Made in America

Best For: Anyone looking for an easy way to grab and move floor tiles.

Price: Starts at $139

Contact: (800) 743-6001 | www.firsttechcorp.com

Upsite Technologies KoldLok® Split Integral Raised Floor Grommet

The KoldLok Split Integral is the industry standard for sealing data centers and raised floor facilities. Its multi-layer brush technology prevents the sagging that's common in competitive grommets. The KoldLok Split Integral greatly reduces costly bypass airflow, increasing usable cooling unit capacity and ensuring maximized efficiency from HVAC equipment.

- Seals cable penetrations with a 96% or greater effectiveness at the demanding static pressures required for high-density cooling as required by data centers
- Split design allows for easy installation around existing cables or re-cabling without removal
- Dresses raw metal edges in compliance with NFPA 75 to protect cables from cutting
- Compliant with Directive 2002/95/EC of the European Parliament and the Council on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)
- **Proudly made in the United States**

Best For: Effectively sealing cable openings at static pressures required for high-density cooling in raised floor environments.

Contact: (888) 982-7800 | www.upsite.com

Upsite Technologies KoldLok Wave® Raised Floor Grommet

The KoldLok Wave is the newest innovation in sealing data centers and raised floor facilities. Its revolutionary patent-pending thermoplastic elastomer sealing technology provides a solid seal and conforms around cable penetrations more effectively than brush grommets. The KoldLok Wave offers the fastest ROI and the longest lifetime value.

- Thermoplastic elastomer material is flame rated UL94-HB
- Split design allows for easy installation around existing cables or re-cabling without removal
- Optional protective cover available for added safety when no cable is present
- Durable ABS frame and cover along with flexible sealing surface engineered to withstand long-term use
- Dresses raw metal edges in compliance with NFPA 75 to protect cables from cutting
- Compliant with Directive 2002/95/EC of the European Parliament and the Council on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)
- **Proudly made in the United States**

Best For: Sealing against wasted bypass airflow in data centers, dramatically improving efficiency and lowering the data center's overall carbon footprint.

Contact: (888) 982-7800 | www.upsite.com

Tate In-Floor Cooling Systems

Tate's DirectAire airflow panel, SmartAire variable-air-volume damper, and PowerAire fan-assist module deliver the right amount of air in the right place. The DirectAire panel angles airflow from the floor to server rack such that 93% of the airflow is captured at the face of the rack. DirectAire works without the need for creating underfloor airflow velocities or rivers, and provides effective containment without rigid structures. The SmartAire dampers provide automatic control over the amount of air passing through an individual panel, which can help save on fan energy when servers are idle. PowerAire is designed to help in dense server racks and blades where a blast of cooling may be needed. PowerAire can be throttled up or down based on power requirements.

- DirectAire panels cools over 20kW per rack @ .10" H2O and can support a design load of 2,000 pounds
- SmartAire automatic dampers allow each panel and rack tandem to be thought of as an individual zone
- PowerAire modules are easy to install in retrofit applications or in new cooling systems

Best For: Data center environments that face the challenges of reducing bypass airflow, improving PUE & increasing capacity.

Contact: (800) 231-7788 | www.tateinc.com

Access Floor Systems

AccessFloorSystems.com offers everything you'll need for a data center floor, including raised floor panels and components, equipment supports, cable trays, trim materials, grommets, ESD carpet and floor, panel lifters, and antistatic mats. AccessFloorSystems.com has been around for more than 25 years, and it offers same-day shipping on most raised floors, components, and accessories.

- Raised floor systems are available for new and used Tate Bar Concore, Woodcore Panels, Tate All Steel Panels, Tate Concrete Panels, and Tate Aluminum Panels
- Replacement panels and components for new and legacy data centers
- Energy-saving solutions for raised floor penetrations and blanking panels
- High-velocity perforated floor tiles and grates to assist with cooling issues

Best For: Enterprises that are building or remodeling the data center floor and want a company that offers a large selection of products and solutions for legacy data centers.

Contact: (800) 868-8606 | www.accessfloorsystems.com

ASM Modular Systems Raised Access Flooring System

ASM
innovations in access flooring

Raised access flooring systems from ASM allow for easy reconfiguration via instant access to wiring and cabling. ASM's raised access floors include technology to address advances in electronic workflow and energy efficiency.

- Incorporates a solid brass positive grounding device in every panel
- Uses nickel chrome plating on critical parts for safety
- Uses a solid tube design that's better than conventional U-shape for high-strength stringers
- Green building elements
- High-pressure laminates available
- Vinyl plastic that's resistant to strong chemicals

Best For: IT administrators who require electrical grounding and want no zinc whiskers and high-strength stringers.

Contact: (866) 516-8531 | www.asmproducts.com

PRODUCT SPOTLIGHT

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

PDU Cables Air-Guard Cable Seal

Seal raised floor cable openings with the Air-Guard Cable Seal product line and realize an immediate cost savings in the data center. These products significantly minimize air loss and improve static pressure to cool data center equipment, which helps prevent expensive electrical equipment from overheating. Air-Guard is the only brushed floor grommet line to offer a dual-stage sealing system with the most effective seal in the data center, and the only one to provide a safety cover for increased safety and durability when cables are not going through the raised floor cut-out. For the highest-quality products in the data center marketplace and the most ease in sourcing your sealing solution, rely on PDU Cables.

- Dual-sealing systems provides an effective, economical means to eliminate bypass air through cable cut-outs
- Choose from products with overlapping brushes and/or gasket material to seal your specific cut-out need
- Flexible and simple cable routing via removal of floor tiles without disconnecting equipment

Best For: The most effective cable opening seal in a raised floor data center environment.

Contact: (866) 631-4238 | www.pducables.com

Critical Power Exchange Raised Access Flooring

Looking for raised access computer flooring or replacement panels for your existing flooring systems? Critical Power Exchange can help by providing both new and pre-owned options for your flooring needs.

We supply customers with the raised flooring systems they need promptly, and often at savings of 40-50% off new pricing.

Our inventory changes daily, so that whatever the size, we provide you with a turn-key solution for even the most complex raised flooring projects.

Also, our specialized teams of installers can conduct a facility walk-through and provide installation planning to assure safe and secure conditions at all times.

Best For: Companies looking for significant savings on new flooring panels or replacement flooring panels for an existing flooring system.

Contact: (877) 315-4176 | www.criticalpower.com

Sealco Tacky Mats

Sealco provides a variety of tacky mats to keep your computer or clean room free of contaminants. Each mat is composed of multiple-layer polyethylene film with a specially treated pressure-sensitive adhesive on one side, which catches the contaminants from shoes or equipment. When sheets gather contaminants, the top sheet can be peeled off to expose a new sheet. The sheets are designed to resist adhesive transfer, preventing sheet-to-sheet de-lamination. Ask about our free removable mat holders that allow easy placement and removal.

- Variety of sizes and colors
- Keeps contaminants away from computer equipment
- Optional company logo imprint
- Mat sheets individually removable and numbered
- Non-beveled edges ensure each sheet is free of contaminants

Best For: Entry ways into computer rooms or any area where dust/dirt can track into the computer room.

Contact: (972) 234-5567 | www.sealco.net

Bergvik Flooring Modular Raised Floor

BERGVIK®
floors on a higher level

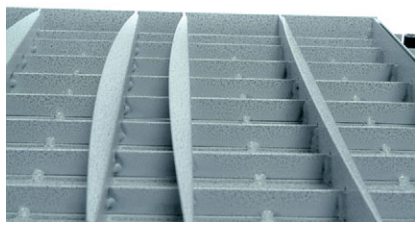
In the flooring business since 1970, Bergvik offers the strongest, most stable and modular raised floor available for data centers. Bergvik's engineering department supplies CAD drawings that are suited to your needs.

- The Iso Floor system offers custom panels as an option to fit your equipment depths and allows for optimization to build smaller and smarter rooms; floor heights from 12 to 94 inches
- River Cooling Airflow Panels with high-plume fins provide superior air stratification to cool upper servers when compared to flat bottom panels; the unique 36- x 24-foot panel also allows for more server racks
- Earthquake bracing frames will fit any raised floor and are tested to NEBS standards

Best For: Enterprises that are looking to lower energy costs by up to 40% and add more server racks in the same footprint, increasing their revenue stream.

Contact: (410) 548-1449 | www.bergvik.com

TRIAD Virtual Cold Aisle Containment Panel

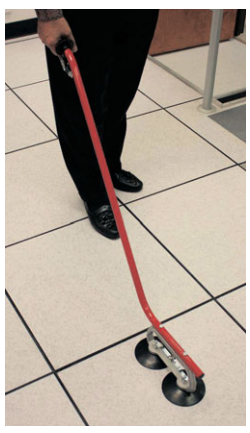


Triad promotes passive "River Cooling System" by replacing ineffective airflow panels in a very cost effective way. Triad's Cold Aisle containment panels utilizes a combination of Fluid Dynamics often associated with Foils (similar to airplane wings) and expansive turbulation of the air stream to present over 95% of the supplied air through the server unit. By using these innovative design combinations not previously seen in data center cooling infrastructure, the immediate effects of better Airflow Utilization Efficiency© (AUE) in Triad's passive River Cooling systems provide 8% to 40% reductions in data center energy bills.

Best For: Data center passive improved cooling while reducing energy consumption

Contact: (720) 530-8699 | www.triadfloors.com

Sealco Stand-Up Tile Lifter



The new Stand-Up Tile Lifter by Sealco lets you pull floor tiles while standing fully erect! The ergonomically designed shaft shifts weight from your back to your shoulders. Suction is engaged or released with the flick of a lever just beneath the hand grip. The ERW steel shaft stands 3.5' high (angled). With 5" diameter neoprene cups, the Stand-Up Tile Lifter is rated to 75 pounds of lift, and yet weighs only 5 pounds! It's available in red or black. The optional wall-mount keeps it always visible and available.

- Steel shaft stands 3.5' high (angled)
- 5" neoprene suction cups
- Weighs only 5 pounds
- Available in red or black

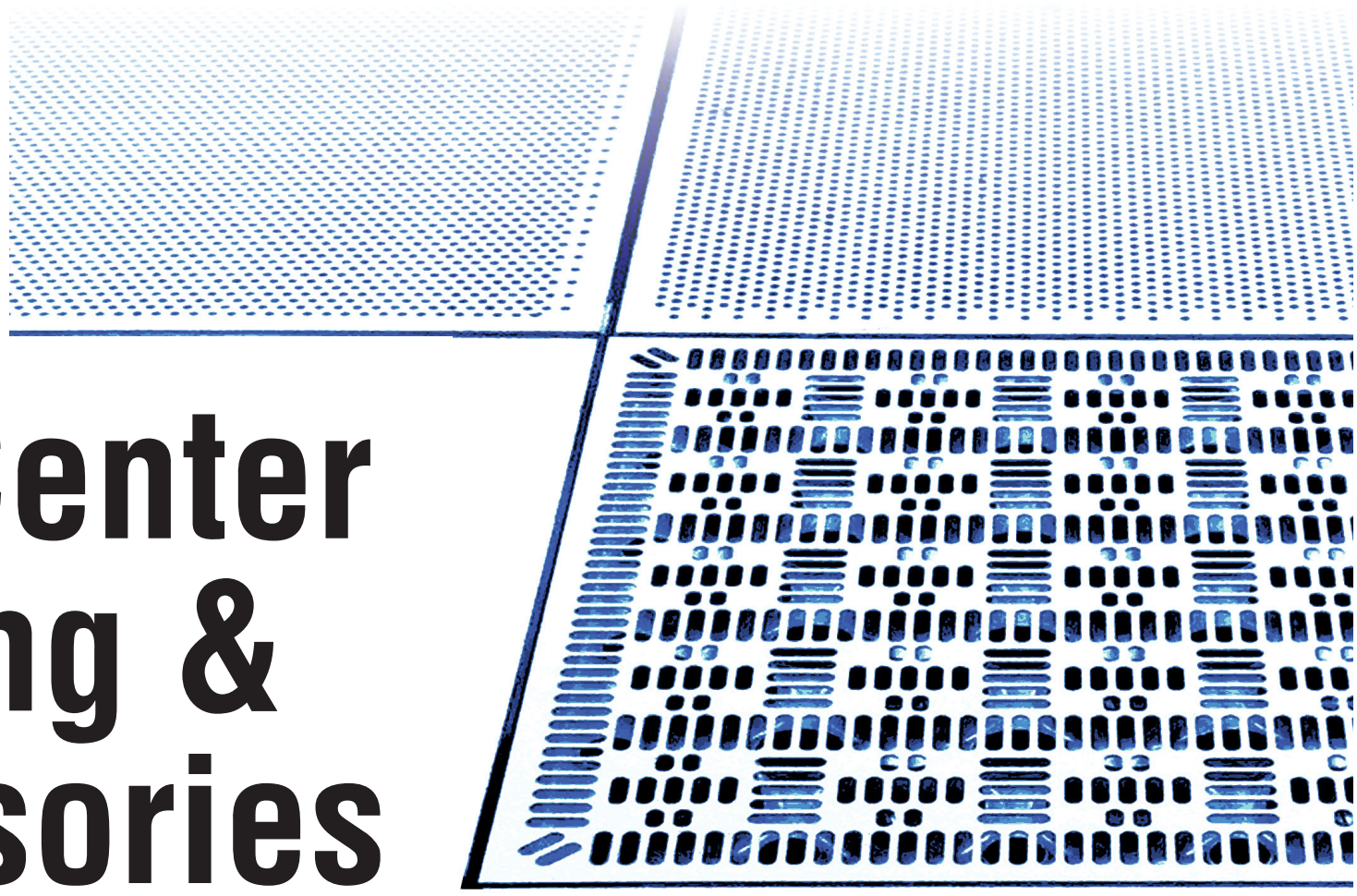
Best For: Any raised-floor data center environment

Contact: (972) 234-5567 | www.sealco.net

PRODUCT SPOTLIGHT

BUYING TIPS:

Data Center Flooring & Accessories



YOU MAY NOT ALWAYS THINK about the material you're walking on as you move through your data center, but it's important to remember that this flooring can be just as important as the servers and other equipment it holds. Choosing the right flooring provides a stable, efficiently cooled data center. Here are some things to keep in mind while shopping for data center flooring.

Panels and cable management. Your data center is a unique facility with its own power, networking, and storage requirements. But it also needs a certain type of flooring, and more specifically certain panels, in order to function at the highest possible level. You should start with the "weight of the equipment, seismic requirements, and the heat load for cooling," according to Scott Alwine, marketing manager at Tate Access Floors (www.tateinc.com).

But cable management is also essential. "It's important to plan your under-floor power cabling layout precisely, establishing designated cable pathways," says Ken Koty, sales engineer at PDU Cables (866/631-4238; www.pducables.com). "Making sure you purchase your power cables to the proper length will help to limit congestion and minimize air dams that can lead to cooling inefficiencies."

Cooling and floor height. Aside from its structural importance, the most crucial function of data center flooring is to aid in the cooling process. Fans and other rack-based cooling solutions are essential, but if you can maximize the available space underneath the floor, you can increase your data center's overall cooling efficiency.

"Floor heights commonly range from 24 to 48 inches and are determined by the amount of power and data cables that will be supplied under the floor to ensure there is enough volume of open space to deliver the air required to adequately cool the equipment," Alwine says. Without this space, you could run the risk of overheating both above and below the floor, resulting in damage and downtime.

Functionality and aesthetics. Regardless of what type of flooring you choose, there will always be a need for cutouts to allow cables to run above and below the floor. And similar to how an insufficiently insulated room allows air leakage, these cable cutouts can also negatively impact the cooling efficiency and the aesthetic appeal of the floor. In this situation, it's good to install grommets with filler material that will plug the holes without permanently blocking access to the cables below.

"In data center floors where cable cut-outs have been made but equipment hasn't been installed and cables haven't been run, having grommets with safety covers in place provides a solid surface for increased durability, safety, and a finished look to the floor," Koty says.

Vendor selection and longevity. If your company doesn't have anyone on staff with experience in installing and maintaining data center flooring, don't hesitate to rely on the expertise of a respectable vendor. It can help you choose the right flooring for your data center's specific needs and prevent the need for a potentially costly flooring replacement months or years down the road.

"It is best to consider the track record and experience of the manufacturer and installation contractor before choosing a raised floor provider," Alwine says. "Their ability to assist with things like seismic calculations, CFD modeling, and installation best practices can be very helpful throughout the entire design and construction process. An experienced team can help ensure that the data center will operate as intended over the lifetime of the facility." P

BUYERS' CHECKLIST

- ✔ Do the flooring panels fit your data center's needs and allow for effective cable management?
- ✔ Is there enough open space underneath the floor for cable routing and cooling?
- ✔ Does your vendor have a stellar reputation and testimonials from past clients?
- ✔ Are all sections of the data center flooring capable of handling the weight and traffic to which they will be subjected?
- ✔ Have you taken the seismic requirements of your data center's location into account and taken the necessary preventative measures?

KEY TERMS

Directional airflow.
Airflow panels such as perfs and grates that deliver air directly to the face of the rack.

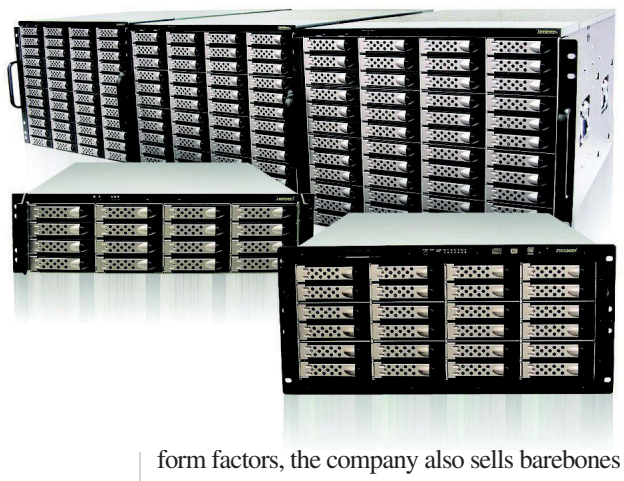
Open area.
The percentage of the entire surface area of a panel that is unrestricted to allow airflow through it.

Panel.
The material that makes up the walking surface of a raised floor. Depending on your weight and traffic needs, the panel may be made from steel, concrete with steel reinforcing bars, or aluminum. The interior may be filled with a lightweight material to give you the ability to easily move panels.

FEATURED PRODUCT

A Boost In Performance

Aberdeen x70 Series Stirling Servers Feature Dual Intel® Xeon® E5-2600 Processors To Improve Data Center Applications



A PERFORMANCE BOOST, no matter how small, is always a good thing. A performance boost reaching up to 80%, however, is a major step up. Aberdeen's dual-socket x70 Series Stirling Servers open the door to such a performance gain by including the new Intel® Xeon® Processsor E5-2600 series, which is built on the Sandy Bridge-EP core design and part of the Romley platform when paired with the new Intel C602 (Patsburg) chipset.

Based on Intel's 32nm manufacturing technology, the Xeon E5-2600 processors offer more cores, cache, and memory capacity, as well as bigger, faster communication pathways, Intel says. The Xeon E5-2600 processors can help companies meet the demand for efficient, secure, and high-performing data center infrastructure by offering unparalleled, balanced performance across compute, storage, and network environments, Intel says.

ABERDEEN X70 SERIES STIRLING SERVERS

(800) 500-9526
www.aberdeeninc.com

The x70 Series Stirling Servers feature the use of processors from Intel's new Xeon E5-2600 series, which include numerous features geared specifically toward boosting performance in data center applications.

A Boost For Data Centers

Aberdeen offers the Xeon E5-2600 processors in dual-socket (Dual LGA2011 Socket R) configurations in eight base models within the x70 Series Stirling Server family in 1U Mainstream, 1U Advanced, 2U Mainstream, 2U Advanced, and 4U Mainstream options. The base 4U Mainstream configuration, for example, provides an Aberdeen Stirling 470 server with dual 2GHz Xeon E5-2650 processors, 16GB of DDR3-1600MHz memory (up to 256GB), two 2TB Hitachi Ultrastar 7200rpm drives (up to eight drives supported), an LSI 9261 SAS2 controller, and a SuperServer 7047R-TRF server kit. The 171-178 and 179 have redundant 80 Gold level power efficiency certified power supplies in a 1U, while the 278 can have up to 24 2.5-inch drives. All x70 Series Stirling models can be customized with add-on cards, backplanes, storage, and other features.

The Xeon E5-2600 series has 17 parts supporting up to eight cores per processor and up to 768GB of system memory (quad-channel DDR3 up to 1600MHz). The Xeon E5-2600 processors provide up to an 80% increase in performance compared to previous Xeon 5600-series processors. They also include new Intel Integrated I/O technology with PCI Express 3.0 support built in. Intel says the addition can triple the rate of data flows coming in and out of the processor, reducing latency by up to 30%. Support for Intel DDIO (Data Direct I/O) technology enables Intel Ethernet controllers and adapters to route I/O traffic straight to processor cache.

The processors include support for Intel AVX (Advanced Vector Extension), technology. Also noteworthy is the Xeon E5-2600's ability to improve energy efficiency by more than 50% vs. the Xeon 5600 series processors, a boon to data centers seeking to gain added performance while reducing power consumption and operating costs. Intel says the new age of "intelligent performance" that the Xeon E5-2600 processors are introducing will result in best-in-class support for virtualization, consolidation, and cloud computing.

Guaranteed Excellence

Beyond the x70 Series Stirling Server models, Aberdeen has been producing general-purpose and storage servers since 1991, placing a strong emphasis on providing customers customization options and high performance offered at competitive prices. In addition to customized servers ranging from 1U to 8U form factors, the company also sells barebones server configurations.

Aberdeen covers every fully configured rackmount server with a five-year-warranty that guarantees the server to be free of material defects for five years. Aberdeen also warranties each server to be free of workmanship defects for the server's lifetime. Other customer-tailored programs include an Internet-based leasing program and a CARES (Custom Assembled Rackmount Evaluation Service) program, which provides qualified customers with a server that's configured to their needs that they can use for a free 30-day assessment period with no obligations. P

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- True RMS Voltage/Current
- SNMP Support
- HTTP Power Control
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- RADIUS Authentication
- Direct TCP Port Access
- Telnet/SSH Menu Device Selection
- Device Port Naming
- Individual Port Password Assignment

BayTech's DS-RPC Remote Management Series provides secure and reliable management for your network, servers, and console ports. The DS-RPC combines the powerful combination of power management and console access. The cost-effective DS-RPC Series is meant for single connection applications. Security features such as SSH v2, RADIUS authentication, SNMP, and user access lists per port allow system administrators to remotely manage the DS Series with greater confidence and control. The selected host module provides either secure in-band or dial-up out-of-band access to your DS-RPC Series remote management solution.

Bay Technical Assoc. Inc. 5239 A Avenue Long Beach, MS 39560 Tel: 228-563-7334 Fax: 228-563-7335 sales@baytech.net

PRODUCT SPOTLIGHT

Security

Network Box E-1000x, E-2000x & E-4000x

Network Box offers a range of UTM devices, including the E-Series aimed at enterprises. Network Box's E-1000x, which is the entry-level member of the E-Series, utilizes an Intel Xeon dual-core processor to power its impressive security technologies. The E-2000x, the midlevel member of the series, features a quad-core Intel Xeon 64-bit processor. At the top level is the E-4000x with two Intel Xeon quad-core processors. As with all Network Box systems, the E-Series can be installed in high availability, load balanced, or cluster configurations.

- E-Series models are the current flagship of the Network Box range of security appliances, specifically designed for the enterprise marketplace
- The flexibility of the E-Series enables enterprises to handle demanding workloads, including mission-critical requirements

Best For: Large enterprises with demanding workloads.

Contact: (832) 242-5757 | www.networkboxusa.com

Network Box M-255, M-285 & M-385

Network Box offers a range of UTM devices, with three aimed at medium-sized enterprises. New from Network Box is the M-385, which makes use of a 3GHz dual-core Intel Core 2 Duo processor to power its impressive security technologies. The M-285 (pictured) features a 2GHz Intel Pentium M processor. There's stateful packet inspection and packet filtering in the firewall, IDS and IDP, anti-malware, antispam/phishing, content filtering, IPsec and SSL VPN, and more.

- Supports up to 150 users
- The M-385 has seven Gigabit Ethernet ports (expandable to 11 and with fiber support); the M-285 has four Gigabit Ethernet ports and a 100Mbps port

Best For: Medium-sized enterprises.

Contact: (832) 242-5757 | www.networkboxusa.com

Network Box S-25, S-35 & S-85

Network Box designed its S-Series UTM devices for smaller offices that need a VPN to connect remote workers to a central location. The S-25 uses an Intel Celeron 1GHz processor with 64KB cache to connect the employees of any small office. The S-35 features an Intel Celeron processor with an additional solid-state drive for logging and caching. The powerful S-85 features the Intel Celeron processor with an added SSD, but also aims to aid small offices requiring UTM+ services, including content filtering and malware protection.

- Designed to help IT staff look after hundreds of branch offices to maintain hardware reliability and powerful offsite management
- With no moving parts in its all-SSD technology, the S-Series delivers fast and powerful performance

Best For: Smaller offices connecting remote workers to a central location.

Contact: (832) 242-5757 | www.networkboxusa.com

Black Box Veri-NAC™

Veri-NAC™ from Black Box provides affordable, airtight network access control. Its non-inline design means it works with existing network and legacy infrastructure, so there's no need for expensive upgrades. And because Veri-NAC doesn't require software agents in client devices, it can be used with devices such as phones and tablet computers.

- Protects the network from unknown or out-of-compliance devices
- Easy to set up, easy to manage
- Detects and stops devices trying to get in under a spoofed MAC address
- Tracks and logs common vulnerabilities and exposures (CVEs)
- Can black hole and quarantine untrusted assets
- Aids in compliance with GLBA, HIPAA, PCI, and other security and privacy standards

Best For: Organizations with high security requirements and limited IT staff.

Price: Starts at $2,495.95

Contact: (888) 245-6215 | www.blackbox.com/go/Veri-NAC

Black Box SmartPath™

The Black Box® SmartPath™ enterprise wireless system ditches expensive controllers in favor of intelligent access points. Because SmartPath access points sort and forward packets like a high-end switch, the network is fast and nimble without the latency-causing hairpin traffic patterns typical of a controller-based wireless solution.

- Automatically compensates for blocked or disabled access points
- Access points enforce security at the network's edge
- Easy to manage via cloud-based service or appliance
- Fast 802.11n throughput rivals that of wired networks
- Built-in guest network enables visitors to access the Internet without endangering network security
- Users can roam between access points with no interruption of service and no need to log in again

Best For: Providing seamless, highly reliable wireless coverage across medium-to-large-sized campuses.

Price: Starts at $849.95

Contact: (888) 245-6215
www.blackbox.com/go/SmartPath

eSoft Unified Threat Management Solutions

eSoft protects businesses on all fronts with Unified Threat Management business-class firewalls and threat management appliances that provide protection against Web and Email threats and graphical reporting on Web usage by employee and by category of Web sites. Web Security with eSoft brings filtered Web access and protection from the latest viruses and malware, blocking inappropriate Web sites using categories such as pornography, violence, social networking and more, improving employee productivity or meeting regulatory compliance. Email security protects your network and users from spam, viruses, malware, and data loss, keeping you one step ahead of hackers

- Detailed and customizable reporting included
- Easy setup and management
- Integrated SSL VPN
- 450 million classified URLs with hundreds of thousands added daily

Best For: Small and midsized enterprises looking for a comprehensive and easy-to-use security solution.

Price: $799-$3,999

Contact: (888) 903-7638 | www.esoft.com

PRODUCT SPOTLIGHT

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

Milton Security Group Edge Series

Milton Security's Edge Series, including the Edge7200i, EdgeSMB, and EdgeUtility, integrates seamlessly with existing switching and wireless infrastructure and authentication services. Deployed in-line at vital network points, the appliance powers solutions for secure wireless, guest wireless, subscriber management, endpoint visibility, and virus control.

- Guest Wireless solution lets companies offer wireless Internet access but attaches granular, identity-based access control
- Subscriber Management provides a Wi-Fi solution with authentication, authorization, accounting, guest-only Internet access, and critical resource protection features
- Endpoint Visibility provides live and customized reports concerning devices' MAC and IP addresses, user credentials, VLAN tags, and session details
- Endpoint Scanning and Virus Control features

Best For: Administrators in need of real-time control and visibility over wired, wireless, and VPN infrastructures.

Price: Starts at $999

Contact: (888) 674-9001 | www.miltonsecurity.com

Milton Security Group EdgeOFIS

Milton Security Group LLC's EdgeOFIS endpoint vulnerability scanner lets you identify and prioritize known and zero-day vulnerabilities to protect your organization's valuable assets.

- Leverages the large and ever-growing library of scan sets used by Milton Security Group's Edge7200 series
- Fast discovery and scanning of all assets on the network
- Non-intrusive scanning engine to optimize network performance and scan network devices, operating systems, applications, and databases
- Prioritization of vulnerabilities to expedite mitigation
- Customizable Systems and Schedules

Best For: Administrators looking for a simple way to see the current status of your end nodes, then proactively patch and remediate systems.

Price: $399 (VM); $999 (hardware). Includes one year of support, monthly security scan sets, and five-server license.

Contact: (888) 674-9001 | www.miltonsecurity.com

Lindy USB Port Blocker

The USB Port Blocker allows system administrators to physically prevent users from connecting pen drives, MP3 players, and other USB mass storage devices to their computers to copy data, introduce viruses, etc. The USB Port Blocker is made up of a combined "key" and "lock" assembly, which plugs into the USB port. To use, simply plug the key lock into the port and release the latch—the lock remains in place. Plug the key back into the lock to remove.

- Physically blocks access to a USB port
- Quick and easy to use
- Six different color code versions available: pink, green, blue, orange, white, and gray
- Each key only works with a lock of the same color

Best For: Enterprises wanting to secure and protect their company from data loss and user theft.

Price: $22.95 for one key and four locks; $18 for 10 locks with no key

Contact: (888) 865-4639 | www.lindy-usa.com

StillSecure Managed Security Services

StillSecure

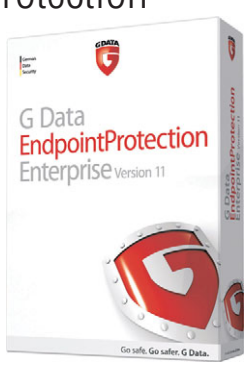
StillSecure offers a full suite of managed security services, from fully managed firewall and intrusion prevention, to content filtering, spam filtering, vulnerability scanning, virtual private network (VPN) services and more, all of which can be implemented individually or bundled to meet an organization's specific security needs. StillSecure's services are co-hosted on a single appliance—either physically or in the cloud— that is installed on a company's network seamlessly and managed by a team of StillSecure security analysts.

StillSecure also supports PCI compliance via a full suite of network security technologies. Superior to standard end point solutions that force users to cobble together their PCI compliance program, StillSecure's PCI Complete is certified to meet a variety of PCI DSS requirements for our clients, relieving them of that cost and effort.

Best For: Enterprises looking for a customized and managed security solution.

Contact: (303) 381-3801 | www.stillsecure.com

G Data EndpointProtection Enterprise



The G Data EndpointProtection Enterprise solution is a server-based, award-winning antivirus program that protects an enterprise network using advanced technologies to thwart unknown viruses and other threats. With DoubleScan technology, your enterprise gains optimum detection rates to stop outside threats before they become an issue. The interface is clean and easy to use, with an Outlook 2010 add-in for virus detection and spam mail filtering.

- Client firewall, idle scan settings, productivity settings
- Supports Active Directory
- Updated dashboard to monitor important happenings
- Optional Silverlight Web interface
- G Data AntiVirus Client and AntiSpam Client includes virus removal and spam OutbreakShield
- New backup module to prevent data loss
- Application control, content filtering, and Internet usage control to ensure policy enforcement

Best For: Enterprises looking for a comprehensive security solution to enforce policies, avoid viruses, and prevent data loss.

Contact: (919) 806-4720 | www.gdata-software.com

Trustwave Unified Threat Management

Trustwave says that its Unified Threat Management delivers a combination of critical security technologies in a single, cost-effective package. With two tiered models to fit a variety of perimeter security needs, Trustwave UTM is available as an appliance or as a fully managed service. Fully configured with antivirus, VPN, intrusion prevention, and a firewall, the appliances can furnish a total throughput of between 4Mbps (TS-10) and 124Mbps (TS-100).

- Stateful firewall
- Inline IPS
- Web and email gateway antivirus
- Web content filtering
- Site-to-site and remote user VPN
- Remote application access control

Best For: Small, medium-sized, and distributed enterprises.

Contact: (888) 878-7817 | www.trustwave.com

PRODUCT SPOTLIGHT

Buying Tips:

Security

You've worked hard to build your business up to where it is today, and it's safe to assume that you'd like to keep it that way. But one major security intrusion can put all of your success in jeopardy. With so many security solutions available on the market, it can be difficult to choose the right ones. Here are some tips on what to look for.

Access control solutions. A great place to start with security is to invest in a network access control solution that will limit unnecessary access to your company's internal resources. If you can prevent outsiders from connecting to your network in the first place, then there is a much smaller chance of a security breach. "Lock down ports by controlling access to the network and ensuring that only those needing access to data, have access. Control the data, whether it's at rest or in transit," says James McMurry, president and CEO of Milton Security Group (www.miltonsecurity.com).

Network access control systems can also be used to monitor the mobile device connections of employees working outside the company. Smartphones and tablets are becoming popular targets for hackers, so checking to make sure the external connection is safe and secure will go a long way toward preventing a potential intrusion.

Unified threat management. A UTM solution goes a bit beyond network access control by essentially creating a gateway through which all users and data has to pass through before it lands on your company's internal infrastructure. UTM combines intrusion prevention, antivirus, antispam, and many other features into one solution designed to protect your company from every possible angle.

"Companies should consider a strong UTM device, which will integrate all the necessary edge protections," says Pierluigi Stella, CTO at Network Box USA (888/315-8886; www.networkboxusa.com). "They should also ensure that the configuration is properly executed by security experts who know the firewall language."

Email security and encryption. Receiving malware-filled messages can result in the infection of one computer or the infrastructure of the entire company. And sending messages with sensitive information no matter what the reason is always a dangerous proposition. That's why Stella recommends companies implement an email gateway system or mail transfer agent that accepts the incoming SMTP connection so that it never touches your server directly. An email gateway proxy, in essence, sits in front of your email server, he says, and can quarantine potentially dangerous messages.

A similar solution can be used to prevent vulnerable outgoing messages. When you send email, it will first be scanned for sensitive content. If anything is detected, the email will be blocked and the solution will recommend some form of encryption to protect the message from prying eyes. This helps remove human error from the equation.

Updates and upgrades. Once you've purchased and installed your security solutions, you have to make sure they will work for years to come. And the best way to protect your security investments is to regularly update them with free releases and strongly consider upgrading to new versions of the software whenever possible.

Mike Donnell, CEO of eSoft (www.esoft.com) says that updates and upgrades are "absolutely critical," because "without them, most tools are rendered completely ineffective." Check to see if your security vendor will set up a long-term upgrade plan that will help cut down on costs. As long as it's financially feasible and provides new functionality, updates and upgrades are great ways to lengthen the life of your security solutions. P

Buyers' Checklist

- ✔ Does the solution allow you to limit access to the network and block unwanted connections?
- ✔ Can the solution provide a perimeter defense that prevents threats from landing on your servers and other internal equipment?
- ✔ Emails make it easy to infect computers with viruses and send out sensitive data to hackers, so you should invest in a strong email encryption solution.
- ✔ Will the vendor help you set up an update and upgrade plan that will let you keep your security solutions up to date without breaking your budget?

Key Terms

Mail transfer agent (MTA).
A solution that catches and checks incoming email for threats before transferring it to your internal email platform.

Network access control.
A solution that helps you limit access to your network and lower the chance of an infiltration.

Unified threat management (UTM).
Software (often installed on a managed appliance) that seeks to comprehensively block malware and network threats through features such as a firewall, antivirus, antispam, intrusion prevention, VPN, access policy enforcement, and more.

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PRODUCT SPOTLIGHT

UPSes

Staco Energy Products FirstLine P 65-250kVA 480VAC UPS

Staco Energy Products has added 160, 200, and 250kVA 480VAC UPS models to its FirstLine P lineup. The company now offers three-phase UPSes for 65-250kVA applications. Up to 98% efficient, the devices use IGBT (insulated-gate bipolar transistor) and DSP (digital signal processor) control to produce true online double conversion with up to eight units in parallel for expandability and redundancy. FirstLine P boasts high efficiency and an impressive power factor, which translate into lower utility costs and a greener footprint. The units protect upstream power supply sources from harmonics and reactive power generated by the load.

- Dual Bus and Dynamic Dual Bus System configurations
- Hot-swappable
- Front, top, or bottom access for placing units against a wall
- Two-year onsite warranty
- Nationwide Service Program

Best For: Computer room and data center applications where affordability, efficiency, reliability, and flexibility are essential.

Contact: (866) 261-1191 | www.stacoenergy.com

Staco Energy Products FirstLine PL 10-100kVA 208VAC UPS

Staco Energy Products FirstLine PL UPS is a parallel-able three-phase UPS meant for 10-100kVA applications. Up to four FirstLine PL units can be run in parallel, providing redundancy with no additional hardware. The units have efficiencies of up to 95% and feature a compact transformerless design that allows for internal batteries up to 30kVA. IGBT and digital signal processor control provides true online, double-conversion technology, while a user-friendly display boasts alarms and LED indicators for bypass, main line, battery powering the load, load on bypass, and normal output.

- Dynamic Dual Bus System configuration
- Space-efficient
- Matching extended battery and options cabinets
- Two-year onsite warranty
- Nationwide Service Program

Best For: Network closets, computer rooms, and small data center applications requiring a high level of available conditioned power.

Contact: (866) 261-1191 | www.stacoenergy.com

Staco Energy Products UniStar P Series 6-10kVA Rack & Tower UPS

Staco Energy Products UniStar P is an online, single-phase parallel redundant UPS available in 6kVA Rack/Universal and 6kVA, 8kVA, and 10kVA Tower models. The products are power- and runtime-scalable, up to 98% efficient, can be configured with up to four units in parallel, and are DSP-controlled. The units feature an LCD/LED mimic panel and easy-to-set user personalization, and they offer continuous power conditioning and smooth uninterrupted switching from utility to battery, handling wide fluctuations without going to battery. The units also have a very low rate of added harmonics, which protects system integrity.

- High input power factor and low current THD
- Flexible Rack/Universal and Tower models
- RS-232 port and optional communications slots
- Hot-swappable battery and matching external battery pack
- Industry-leading three-year warranty
- Nationwide Service Program

Best For: Network closets and small computer rooms requiring a high level of continuous available conditioned power.

Contact: (866) 261-1191 | www.stacoenergy.com

Rackmount Solutions Minuteman Endeavor UPS Battery Backup

Rackmount Solutions' Minuteman Endeavor series of UPS battery backup products delivers an online uninterruptible power supply in a form factor that can be rack-mounted, placed on the floor as a tower, or installed in a cabinet. With a power factor of 0.8 watts and available with capacities up to 3kVA, the Minuteman Endeavor series features hot-swappable batteries, rapid battery recharging, and extended runtime using external battery packs, and it's also RoHS-compliant. Outlet receptacle control for noncritical load shedding is included. The Endeavor series also includes Minuteman SentryPlus monitoring and control software and a front panel display with status indications.

- Simultaneous RS-232, USB, and SNMP communications
- Three-year warranty with up to $200,000 equipment damage insurance
- Manual and automatic testing
- Harmonic distortion control
- Dedicated emergency power off port

Best For: Any situation where form factor flexibility is needed.

Price: Starts at $546.75

Contact: (866) 207-6631 | www.rackmountsolutions.net

Rackmount Solutions Eaton Evolution S UPS Battery Backup

The high-density, line-interactive Eaton Evolution S UPS (1750 VA/3000 VA) is an ideal solution for protecting servers, network devices, storage systems, point-of-sale terminals and other sensitive electronic equipment. The Evolution S can be easily integrated into a wide variety of environments and can provide hours of battery runtime. And, with one of the best price/performance ratios, this UPS offers a low total cost of ownership.

- Line-interactive technology with sine wave output to ride through blackouts and brownouts without stressing the connected devices and high output to protect equipment with PFC power supplies
- Versatile rack/tower form factor available in high density 2U or 3U size
- Extended runtime capabilities with multiple, hot-swappable battery modules (optional)
- One USB port, one Serial/Contacts port and one card slot
- Remote reboot of locked equipment, sequential start-up

Best For: Any situation where form factor flexibility is needed.

Price: Starts at $599

Contact: (866) 207-6631 | www.rackmountsolutions.net

CyberPower Systems PFC Sinewave UPS Systems

The CyberPower CP1500PFCLCD PFC Sinewave UPS System with pure sine wave output and multifunction LCD safeguards computer systems, servers, and networking hardware that use conventional and Active PFC (Power Factor Correction) power supplies. Its AVR (automatic voltage regulation) topology delivers clean, consistent AC power, protecting connected equipment and preventing costly business interruptions. Its patented GreenPower UPS™ advanced circuitry reduces UPS energy costs by up to 75% compared to competitive models. The PFC Sinewave UPS Systems solve the critical compatibility issues of non-sine wave UPS products working with computing systems using Active PFC power supplies (ENERGY STAR 5.0).

- 1,500VA/900W pure sine wave UPS
- Line-interactive topology
- AVR & GreenPower UPS

Best For: Midrange to high-end computer systems, servers, and networking hardware that use conventional and Active PFC (Power Factor Correction) power supplies.

Price: $259.95

Contact: (877) 297-6937 | www.cyberpowersystems.com

PRODUCT SPOTLIGHT

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

Data Center Systems, Inc. Liebert APM

The Liebert APM is a row-based, modular, high efficiency and high availability mid-size uninterruptible power supply (UPS) system for mission-critical applications. This transformer-free, on-line UPS allows quick power capacity increases with the addition of modular, internal FlexPower™ core hardware assemblies. Each FlexPower™ Module has its own control board - no centralized "Control Module", no powering down to add module, and no single point of failure inherent in competitive products.

- Industry's highest reported efficiency rating up to 94% with virtually flat efficiency curve from 50-100% load
- UPS industry standard, VRLA (Valve Regulated Lead Acid) batteries for increased reliability
- Integral Alber battery monitoring option for increased reliability
- Can be paralleled for capacity and/or redundancy

Best For: Small to medium-sized data centers, server rooms, production areas, labs and testing facilities, and telecommunication centers.

Contact: (952) 403-9900 | www.datacsi.com

Data Power Technology Liebert GXT3

Reliable UPS performance is the key to increasing business systems' availability, reducing downtime risks, and enabling future growth. The Liebert GXT3 on-line UPS from Emerson Network Power protects IT equipment from virtually all power disturbances including: blackouts, brownouts, sags, surges and line noise, delivering continuous, high-quality AC power with no break when transferring to battery. This rack/tower convertible UPS is available 120V and 208V systems, in capacities from 500 VA to 10,000VA (230V systems also available).

- Compact system includes an internal battery, and requires less space than similar UPS systems in this capacity range
- Liebert GXT3 UPS is backed by the industry's best warranty, a two-year, no-hassle replacement warranty.

Best For: Reliable protection of PCs, network workstations and closets, servers, large network peripherals and VoIP applications.

Contact: (402) 592-7860
www.datapowertechnology.com

Critical Power Exchange Powerware 9390-160 (Refurbished)

Protecting critical network and computing systems is the main focus of the UPS system. Not only can this unit provide short term backup for a power outage, but it can also protect against fluctuations such as surges, spikes and sags that you don't see.

- 100kVA Output
- Input 480V - Output 480V
- Two battery cabinets

Best For: Mission-critical data centers, medical facilities, and call centers.

Price: $37,000 (est., depending on run time)

Contact: (877) 315-4176 | www.criticalpower.com

Critical Power Exchange Liebert NPower UPS (Refurbished)

Protecting critical network and computing systems is the main focus of the UPS system. Not only can this unit provide short term backup for a power outage, but it can also protect against fluctuations such as surges, spikes and sags that you don't see.

- 40kVA Output
- Input 208V - Output 208V
- Attached two-panel PDU and battery cabinet

Best For: Mission-critical data centers, medical facilities, and call centers.

Price: $24,000 (est., depending on run time)

Contact: (877) 315-4176 | www.criticalpower.com

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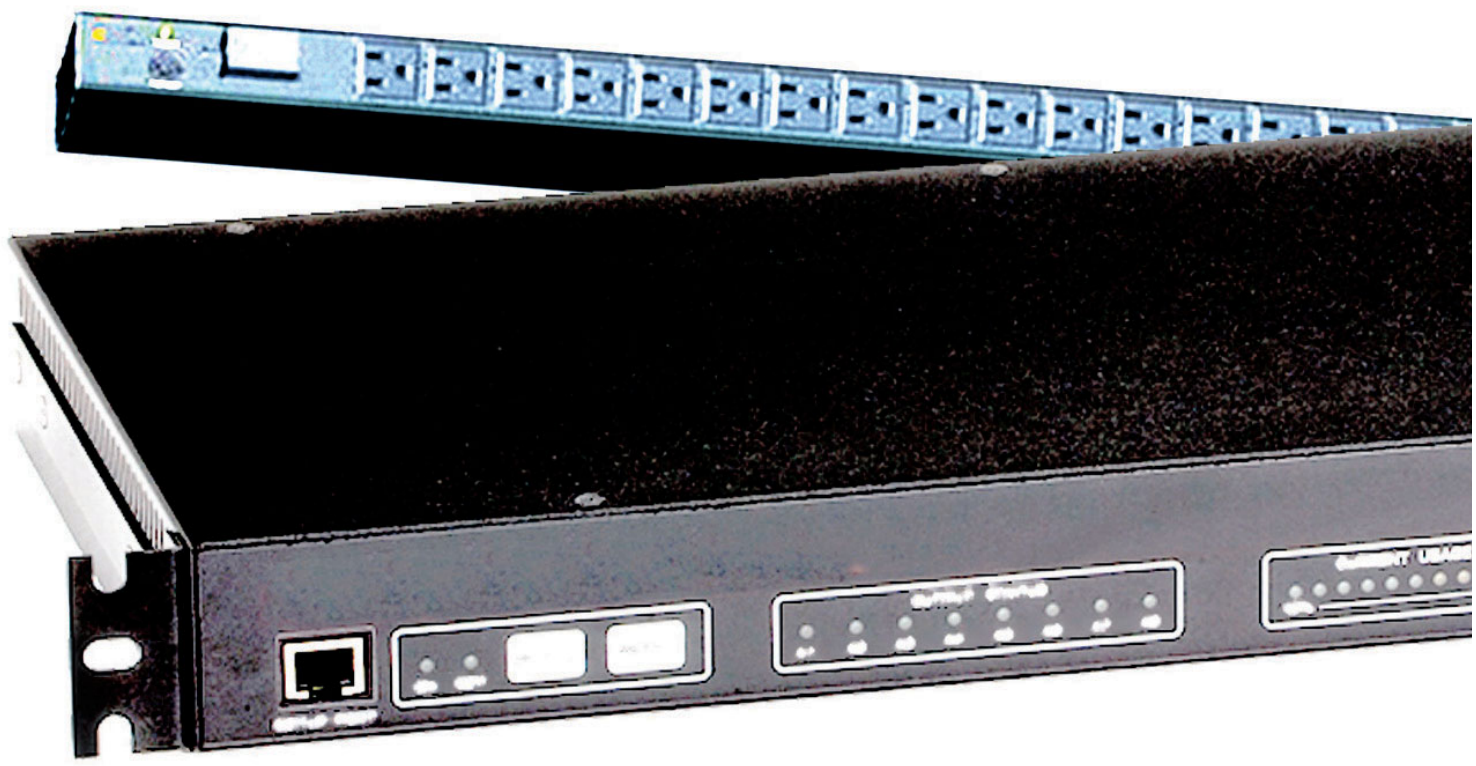
PRODUCT SPOTLIGHT



Buying Tips:

UPSes

The importance of UPSes can't be overstated. If power outages occur and the data center doesn't have UPSes in place that can meet necessary power requirements, the result will be potentially business-crippling downtime. Consider the following advice when purchasing UPSes.

Cover The Basics

Narrowing down the exact elements you should seek in UPSes can be difficult, and the number of options available can complicate matters. "You have to start with some basics and be armed with some knowledge before making a selection," says Brett Femrite, director of business development at Rackmount Solutions (866/207-6631; www.rackmountsolutions.net). "Selecting the appropriate size UPS and feature set aren't the easiest tasks." Prep work includes having data available detailing the total load of all equipment you'll connect to the UPS, the minimum time UPS batteries must provide power, and the maximum runtime needed, he says. "You'll also need to know the voltage of the electrical service that will power the UPS," Femrite says.

Jim Hall, marketing manager at Staco Energy Products (866/261-1191; www.stacoenergy.com), advises obtaining UPSes that provide an overall efficiency rating of 95% or greater, input power factor greater than 99%, and input distortion factor of 3% or less. Also consider models with multiple operation modes that are generator-friendly and that support hot system expansion, which allows parallel UPS additions without going to maintenance bypass, resulting in continuous protection of the loads.

Overall, ensure the UPS has sufficient capacity to handle IT loads. Additionally, make low TCO a primary objective when selecting UPSes, Hall says. "This includes batteries and other auxiliary hardware. The considerations are initial cost to acquire, install, operate, and maintain the equipment." UPS maintenance (in-house or outsourced) is also a significant portion of TCO cost, he says. Additionally, backup batteries that need replacement form the main factor affecting a UPS TCO figure, he says. Be sure to pay attention to battery types, longevity, quantity, and automatic testing when specifying a UPS.

Determine What's Important

The UPS features your enterprise needs can depend greatly on the protection level required for given applications. Femrite says that although it's desirable to have a UPS with a high efficiency rating, external bypass switches that enable power to bypass the UPS for maintenance purposes, monitoring capabilities (local and remote), warranties (system, batteries, etc.) and high-performance filtering, "they may not all be needed or cost-effective."

Hall says three-phase online double conversion (converts AC to DC power and back to AC) UPSes provide the best overall value while providing conditioned power to IT loads. Such systems completely isolate the load from the primary AC line, preventing noise, sags, and swells from reaching the load. Also consider UPSes with high-performance filtering (protects upstream power sources from harmonics and reactive power), dual input for main and secondary emergency standby power (increases resilience of both single and parallel configurations), and IGBT (insulate-gate bipolar transistors) and DSP (digital signal processors) that provide for a true online double conversion UPS system, Hall says.

Monitor Battery Power

Batteries, Halls says, are the leading cause of power interruptions, both as primary emergency power backup and as the source of crossover power for starting backup generators. Batteries degrade with age, he says, even when not experiencing lots of discharge cycles. If minimum runtime is critical, select a battery that provides a cushion so that after several years minimum, runtimes are still achievable, he says. Also ensure the UPS is properly sized to handle transient loads that might occur when utility sources aren't available. "While a UPS can handle significant momentary overloads using the bypass, this capability is not available when running on battery power," Hall says. Enterprises often buy UPSes sized too close to the average load power and don't take transient loads into account, he says.

Also, Hall says, federal law requires that all used lead acid batteries be managed as universal waste. "For this reason alone, facilities with lead acid valve regulated or wet cell/flooded batteries should consider hiring approved firms to handle all battery installations, maintenance, and disposal," Hall says. P

Buyers' Checklist

- ✔ Determine your power and protection requirements
- ✔ Ensure the UPS can handle required loads
- ✔ Make certain the UPS provides sufficient runtime and capacity
- ✔ Consider outsourcing battery installation, maintenance, and disposal duties
- ✔ Determine warranty, insurance, and guarantee requirements

Key Terms

Line-interactive:
A UPS type with built-in line-sensing abilities to regulate high- and low-voltage levels; an inverter activates when power loss occurs and the system switches to battery power.

Online:
A UPS type providing the highest protection level; the inverter is online and operates constantly to eliminate incoming surges and low and high voltage issues while delivering clean power.

Standby:
A UPS type that runs power through surge suppression to connected equipment; after a power outage, the UPS switches to battery backup power, reverting to AC power when power returns.

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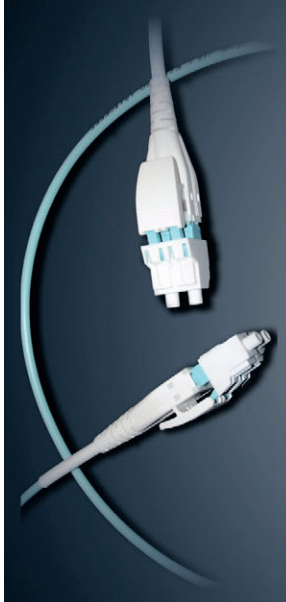

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An IT Expert's WORST FEAR & How MovinCool Averted DISASTER

Eric Rieger, President of WEBIT Services, had a major server room emergency after three off-the-shelf A/C units quit. Now he has a MovinCool Office Pro 12. And greater peace of mind.

"Its performance and reliability are impressive and the peace of mind it delivers is priceless.

To read more about Eric's application story, visit: MovinCool.com/Webit

See the top 50 reasons why MovinCool products are the highest quality in the industry, visit MovinCool.com/50Reasons

For computer servers to operate properly, they've got to be kept cool. Which was Eric Rieger's intention when he purchased three retail A/C units from a local "big box" store. Rieger, President of WEBIT Services, a managed technology services provider in the Chicago area, thought he had found an ideal solution. But all three subsequently failed. The last one on Christmas Day. After quickly contacting his local distributor, Rieger chose a MovinCool Office Pro 12. "Its performance and reliability are impressive," he reports. "And the peace of mind it delivers is priceless."

The self-contained MovinCool Office Pro 12 pumps out 12,000 Btu/hr, works on standard 115v power and requires no costly installation. Just roll it in. Plug it in. Turn it on. And its programmable digital controller easily integrates into office automation systems. "I even recommend MovinCool to clients," concludes Rieger. From mission critical cooling applications to computers and manufacturing processes and people, MovinCool is the solution.

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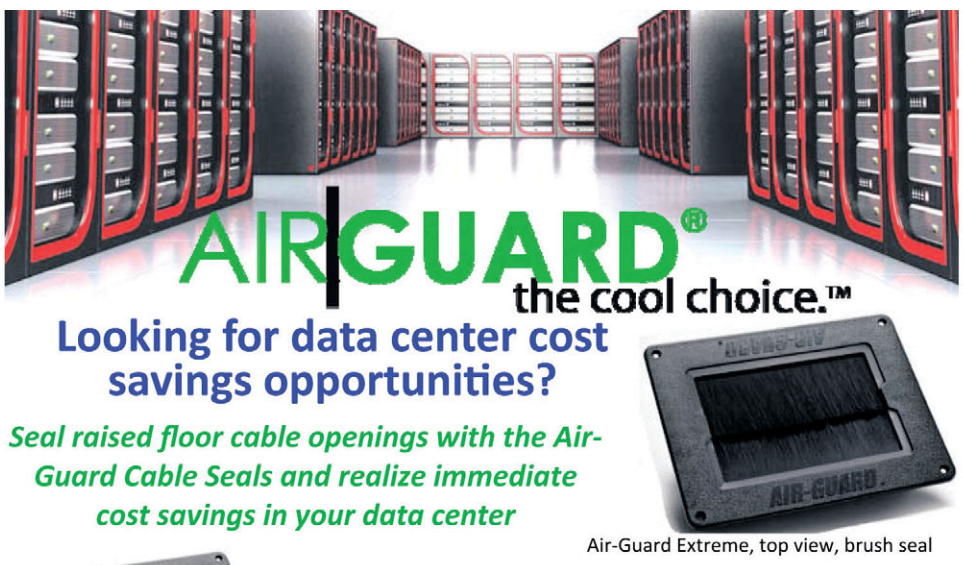

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Air-Guard Extreme top view, safety cover

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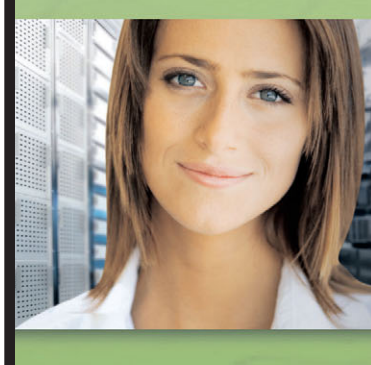

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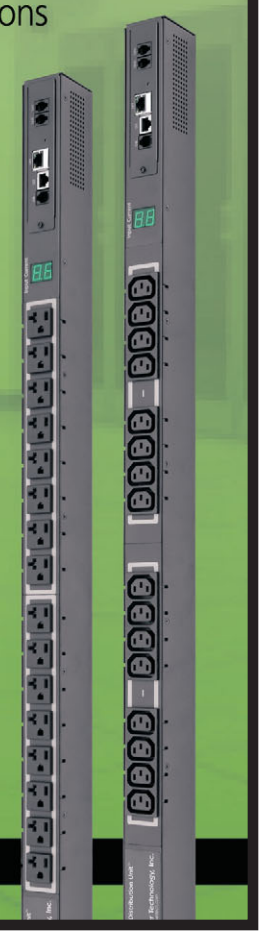

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PRODUCT SPOTLIGHT

Data Center Furniture

Hergo Large Screen Multi-Media Cart

Hergo's large screen open frame cart features a Universal Tilt Plasma LCD Mount to accommodate units from 37" to 60".

- 72- x 36-inch (HxW) frame assembly
- 26-inch legs with heavy-duty casters
- 12-inch utility shelf to hold remote controls, DVDs, or product manuals
- 36-inch horizontal cable raceway
- Quality powder coat finish—environmentally friendly
- Options include power management, rackmount attachment brackets, and keyboard/mouse assembly

Best For: Customers needing a sturdy, all-in-one solution for presentation and AV equipment. Ideal settings include conference rooms, studios, classrooms, and libraries.

Price: Contact a Hergo specialist today for pricing

Contact: (888) 222-7270 | www.hergo.com

Hergo Motorized Height Adjustable Workstation

Hergo's top grade adjustable height computer workstation is available with a 48"W or 60"W desktop. The high-pressure laminated work surface and heavy-duty wood base have a tamper resistant edging commonly used in environments where hygiene and edge bond are important. This electrically powered workstation comes equipped with a control pad that is mounted underneath the desktop. Range of Motion is 24" with a Maximum/Minimum setting of 56"/32" respectively.

- Weight Capacity: 150 lbs. per leg when weight is evenly distributed.
- Steel Reinforcement Plate for Wood Base
- Base Unit Ships Fully Assembled in a Crate
- Options include: Flat Panel Arms, Keyboard/Mouse Tray, Power Strip, CPU Holder and Storage Bin

Best For: This electrically powered, ergonomic Height Adjustable Workstation is ideal for work environments where flexible sit-stand access is crucial.

Price: Contact a Hergo specialist today for pricing

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Hergo Commando2 Console

Hergo's double island top Command Center is a modular, low-profile multi-monitor workstation for the modern-day jack-of-all-trades operator.

- Four base frames—42 x 30 inches (H x W)
- Two high-pressure laminated island desktops—30 x 72 inches (W x L)
- Four track-mounted flat panel extension arms
- Side enclosure and modesty back panels
- Slide-out CPU shelf
- Under desk 19-inch relay rack

Best For: Command centers, call center and network operations where a multitasker can rise to the challenge and tackle daily hurdles in an attractive, efficient, and functional workspace.

Price: Contact a Hergo specialist today for pricing

Contact: (888) 222-7270 | www.hergo.com

Rackmount Solutions Adjustable Height Corporate Training Tables

Rackmount Solutions knows one size does not fit all. The company offers tables that adjust from 28 to 35 inches, providing your attendees with the comfort and ergonomic efficiencies that come from the ability to adjust the height of your training table. These tables are available in five stock colors, have a lifetime warranty, and are made in the USA. Customizable with a variety of keyboard drawers, CPU holders, and locking cable bays, these units ship within three days of receipt of order.

- Choose from stock 36-, 48-, 60- or 72-inch-wide tables
- Accommodates up to two users
- Depths of 24 or 30 inches provides plenty of work surface
- Sturdy steel legs and 1.25-inch-thick table top surfaces
- Modesty panel matches top surface for beautiful aesthetic
- Locking cable bay as option to provide complete security for cables and equipment cords

Best For: Corporate training areas that require versatile, highly durable tables catering to multiple users and frequent ergonomic adjustments.

Price: Starts at $268

Contact: (866) 207-6631 | www.rackmountsolutions.net

Rackmount Solutions Bravo Power Corporate Training Tables

Bravo Power Corporate Training Tables from Rackmount Solutions make it easy to connect your monitor, an Internet connection, and additional peripherals to Rackmount heavy-duty corporate training room tables by using a recessed, pop-up, or under-table power source. These tables are customizable with a variety of LCD mounts and keyboard trays and are ideal for environments where a power source on the table enhances usability and convenience.

- Choose from stock 36-, 48-, 60-, or 72-inch widths or create a custom configuration
- Common power modules used are two CAT 6 RJ-45 and two 15A/125V receptacles with circuit breaker, but modules can be interchanged to fit your needs
- Heavy-duty 14-gauge steel legs and a 1.25-inch-thick laminated table surface make these units almost indestructible
- Superior strength with support for up to 900 pounds

Best For: Corporate training areas that require versatile, highly durable tables with the convenience of power built in.

Price: Starts at $439

Contact: (866) 207-6631 | www.rackmountsolutions.net

Rackmount Solutions Heavy Duty LAN Rack/ Computer Station

The Heavy Duty LAN Rack/Computer Station from Rackmount Solutions is designed for heavier equipment loads, with each shelf supporting more than 850 pounds. All shelves are adjustable in 1-inch increments and may be placed anywhere on the frame. This workstation features a high-quality tube steel frame and unlimited variations when combining different LAN station widths, plus corner stations.

- Fully welded four-post frame with 2-square-inch, 14-gauge steel virtually eliminates vibration
- 14-gauge steel horizontal back panels for maximum strength and stability
- Available in 36-, 48-, 60-, and 72-inch widths; 84 inches high
- 1.25-inch-thick work surfaces support more than 850 pounds each
- LAN rack ships fully enclosed in a shipping crate to protect from damage

Best For: Anyone who needs shelving that can support heavy loads or flexible configurations.

Price: Starts at $1,154

Contact: (866) 207-6631 | www.rackmountsolutions.net

PRODUCT SPOTLIGHT

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

DustShield™ Printer Enclosures

DustShield Bar Code Label Printer Enclosures secure continuous function and reliability. With DustShield protection, hardware can be efficiently placed where work is done in any industrial, manufacturing, or warehouse environment. DustShield Printer and Label Printer Enclosures are available for all brands and models of printing devices and can be customized for extreme environments and ergonomic requirements.

- Protects printer media integrity and performance
- Impact/heat/cold/corrosion resistant
- Filters 98% of airborne contaminants
- NEMA 12 and NEMA 4 rated
- Available in grey or black

Best For: Companies that require efficient, cost-saving, low-maintenance, dependable performance from industrial printing devices in dusty, dirty, grimy, extreme heat, or freezing cold environments.

Price: Starts at $310

Contact: (800) 587-9557 | www.dustshield.com

DustShield™ Computer Enclosures

DustShield Computer, Monitor, and Display Enclosures protect electronic equipment in industrial, manufacturing, and warehouse environments. DustShield Enclosures are available for all models and configurations of devices and can be customized for extreme environments and ergonomic requirements. Standard and custom upgrades are available, including touchscreens, heating, and cooling.

- RF equipment compatibility
- Impact/heat/cold/corrosion resistant
- Filters 98% of airborne contaminants
- NEMA 12 and NEMA 4 rated
- Available in grey or black

Best For: Enterprises that require efficient, cost-saving, low-maintenance, dependable performance from computer workstations in dusty, dirty, grimy, extreme heat, or freezing cold environments.

Price: Starts at $425

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Emcor® ESQ Enclosure Line From Crenlo

The Emcor ESQ® enclosure product line from Crenlo is ideal for applications requiring a high-quality, economical means for housing electronic equipment with a need for flexibility. Well-suited for industrial settings, the ESQ is available in seven different frame styles — Vertical, Slope Front, Low Silhouette, Wedge, Turret, Riser and Instrument — each of which is modular. It can also be modified or built completely custom to meet the needs of nearly any application.

- Seven available frame styles
- 19-, 24- and 30-inch rack-mount panel width options
- Vertical frames available in depths ranging from 18.5 to 30.75 inches
- Available in heights ranging from 12U to 45U
- Can be configured, modified or built custom to fit any footprint or installation

Best For: Mounting and protecting a variety of rack-mount equipment and monitors for sit or stand work environments.

Contact: (507) 287-3535 | www.crenlo.com/enclosures

Kendall Howard Performance Series Workstation sold by Peripheral Manufacturing

The Kendall Howard Performance Series LAN Station/Work Benches are top of the line in quality and versatility. Each bench frame is made from only the highest quality American-made tube steel.

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Data Center Depot Hercules LAN Station

The Hercules LAN Station has an industrial-strength, super heavy-duty four-post frame and measures 84 x 72 x 36 inches. It's easy to assemble and has a 72- x 36-inch work surface, two upper shelves (72 x 24 inches), two steel legs with levelers, and three horizontal back panels.

- Shelves can hold up to 800 pounds and are adjustable in 1-inch increments
- Legs are made of 14-gauge tube steel
- Shelves are steel-reinforced and have high-density laminate
- 72-inch-high frame available for the same price as the 84-inch model
- Available in a variety of sizes
- Lifetime guarantee

Best For: Data centers in need of an easy-to-assemble, industrial-strength LAN station.

Price: Starts at $1,020

Contact: (877) 429-7225 | www.datacenterdepot.com

Data Center Depot Samson LAN Station

The Samson LAN Station features a super heavy-duty cantilever frame and measures 84 x 48 x 36 inches. The work surface measures 48 x 36 inches, and the two upper shelves measure 48 x 24 inches. The Samson comes with two horizontal back panels.

- Shelves can hold up to 450 pounds and are adjustable in 1-inch increments
- Legs are made of 14-gauge tube steel
- 72-inch-high frame available for the same price as the 84-inch model
- Lifetime guarantee
- Free consultation
- Available in a variety of sizes
- Optional accessories, including mobile server cart and pull-out keyboard shelves, are available

Best For: Data centers in need of a super heavy-duty LAN station that is easy to adjust or expand.

Price: Starts at $966

Contact: (877) 429-7225 | www.datacenterdepot.com

PRODUCT SPOTLIGHT

Buying Tips:

Data Center Furniture

When you think about it, furniture is the real backbone of your data center. But buying data center furniture isn't as simple as pointing and clicking. Here's what to look for in the furniture and how to choose the best possible vendor.

Usage and design. When looking to buy data center furniture, the best place to start is with your company and employee needs. For instance, if you are a cloud services provider, you will need plenty of racks and cases to hold the many servers and storage solutions necessary to fulfill customer requirements. "Some companies need conference room furniture for secure and private consultations and others, such as network centers, might utilize server cabinets or colocation cabinets and racks," says Susan Wynne, senior sourcing specialist at Rackmount Solutions (866/207-6631; www.rackmountsolutions.net) The furniture you choose depends on the services your company provides.

After deciding what types of furniture you need, you should look for key features, such as height-adjustment for chairs or cable management systems for racks. If you can invest in modular furniture with swappable pieces, you'll have room for future growth, according to Wynne. And it's always important to choose furniture that will have a long lifespan. "You have to know that your current furniture will still be available in six or 12 months should you wish to duplicate or expand," Wynne says.

Maximize space. You can save money on data center furniture without sacrificing quality by simply making sure you are using space efficiently. One way to do this is to go vertical rather than horizontal, possibly by investing in pieces of furniture that are wall-mountable. "Office and lab space is at a premium," says Kristen Speranza-Diamond, vice president at Hergo (888/222-7270; www.hergo.com). "It's beneficial to go vertical and make the best use of square footage."

Speranza-Diamond says that most necessary pieces of furniture and equipment for data centers are becoming less expensive, including LCD displays, "so everyone is upgrading and making the transition to go compact." Manufacturers are putting more advanced technology into smaller packages, which will help you put more equipment into each piece of furniture.

Vendor longevity and reputation. A solid data center furniture vendor will be well-established and have a long history in the industry. If a vendor has a long track record of high-quality products and services, then you can view it as a partner and work with the company for years to come. "You want a vendor that you can invest in for the future," says Eli Hertz, CEO and president of Hergo. "You don't want to deal with a company that will only be around for a one-time purchase."

Also, when it comes to choosing vendor, you should do your due diligence and research all of your available options. "Look for a reputable company with knowledgeable sales staff and one with short lead times," Wynne says. She also recommends spending more money upfront on quality products from a long-standing vendor. "The initial investment may be more than you wanted to spend, [but] the furniture will stand the test of time." P

Key Terms

Adjustable height.
Refers to components users can raise or lower for a better individual fit. Some higher-end furniture can be adjusted electronically.

Cable management.
Built-in grommets, channels, or other features to manage cables and wiring.

Modular.
Furniture components that are interchangeable or can be easily modified.

Buyers' Checklist

- ✔ **Seek out quality.** Although looking for deals can help companies on a tight budget, sacrificing quality as a result can end up costing companies more in the long term, especially if buying from vendors that don't offer lifetime warranties on furniture.
- ✔ **Know the delivery terms.** Before buying furniture, determine if the delivery includes bringing it inside the facility, requires a lift gate or loading dock, and includes assembly or puts the responsibility on you or a third-party installer.
- ✔ **Go modular when possible.** Buying components that are interchangeable lets you modify the setup to meet changing needs, including downsizing or expanding space. Increasingly, individual furniture units can be mixed and matched and layout configurations easily altered.
- ✔ **Build vertically.** Purchasing components that support building vertically promotes space efficiency.

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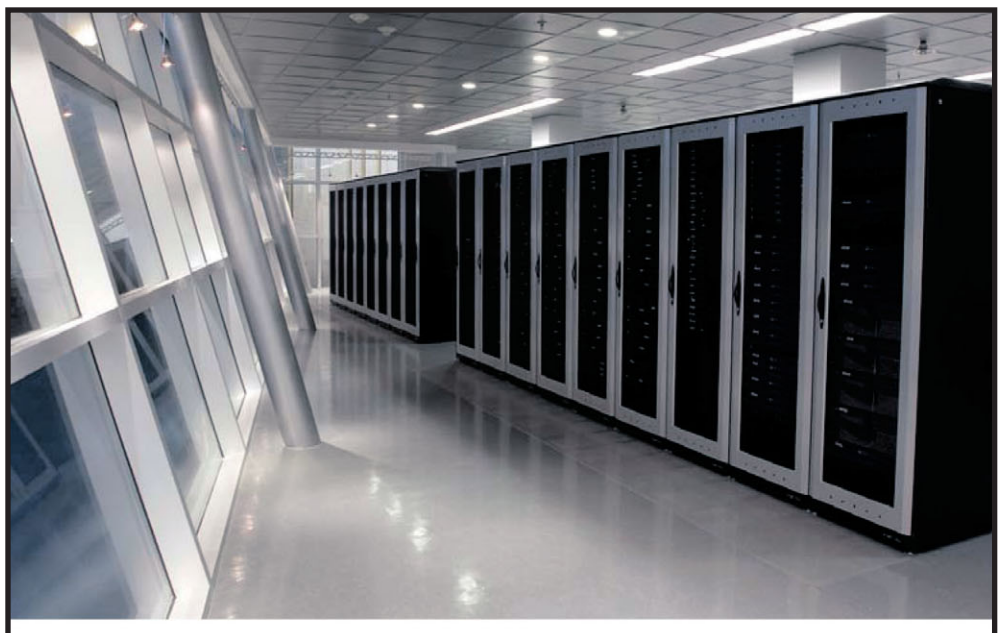

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SIX QUICK TIPS

Better Data Center Design

Future-Proof Your Design To Save Time & Money

There are a lot of factors that go into designing a data center. You need to think about the components you already have, the equipment you'll need to buy now and in the future, and exactly how much space you'll need to hold your physical infrastructure. Plus, you have to create a room layout that will not only maximize the space and functionality of the data center, but also have room for expansion in the future.

It's important to build your data center correctly from the beginning so that you don't have to live with an unacceptable design.

✔ Understand Your Employee Needs & Don't Rush The Design Process

First and foremost, a good data center design takes the needs of employees into account. After all, the men and women that will be working in the room need adequate space to move around and access equipment. "Ultimately, your data center is a contributor to uptime for your company," says Darin Stahl, lead research analyst at Info-Tech Research Group. "It's about making sure the facility supports the humans that have to work there, and not contributing to potential outages because of shortcomings in your design. Look at it from a people, process, and technology point of view."

In any design, make sure you understand the three S's, says Robert Painter, senior vice president of engineering and construction at Ascent (www.ascent-corp.com). These include Scope (real estate, connectivity, power, reliability, maintainability, scalability), Schedule (timeline and overall growth plan), and Spend (budget, Opex vs. Capex, turnkey services), he says.

✔ Build A Thorough Budget & Consider Hiring Designers

Money is always an important consideration during the data center design process, but there's more to it than knowing how much it will cost to build the room itself. According to Stahl, a solid budgeting plan will take everything into account from in-house servers and storage to potential virtualization or offsite hosting opportunities. While formulating a budget, you could come to the realization that you won't be able to afford the type of data center you would ultimately need, which will lead to a build vs. buy consideration, Stahl says. "If you can't achieve your design at a cost-effective basis, then maybe one-third of that infrastructure might have to go to a different facility or colocation."

Unless you have a highly skilled and experienced designer already on your staff, then you may need to hire one from outside of your company. There are a variety of designers, including ones that focus on layouts or ones that focus on specific areas, such as fire protection technology. And in the end, a designer will be able to help you make the "build vs. buy" decision and make sure you aren't overestimating or underestimating how much space you'll need.

✔ Always Be Flexible & Willing To Change Your Design

You may feel the need to stick to your original data center design because you put significant time and energy into it, but if you want the design to be successful in the long term, you'll need to be adaptable as new information arises and be willing to make adjustments to your design plan if it means changing your data center for the better.

"In the earliest phases, a designer will only know a facility's total loading and will design around watts per square foot or a kilowatt per cabinet because this is the best information available at the time," says Christian Pastrana, sales manager at Future Facilities (www.futurefacilities.com). "Oftentimes, the design is set at this phase and will remain static throughout the rest of that facility's life. However, as the project progresses, better and more specific data will become available, which should have an impact on the design."

✔ Prepare Early On For Future Expansion

Your company will expect growth and expansion in terms of revenue and customer base, but you should also plan for possible expansion in your data center space. If you do earn more customers over the years, then the demands of your data center will change. You might need more servers, storage, or networking equipment and so you'll need the extra space to hold them.

"It's not so much about changing the design as it's built, it's about recognizing that a design needs to be dynamic and allowing for that dynamic aspect at all phases from the beginning," Pastrana says. "Things are going to change, and if you set everything in stone from day one, you're destined for disaster."

Ascent's Painter agrees, adding, "As companies plan for their future data center, expansion should be a primary consideration in the overall process."

The key is to know what type of performance you need right now to make sure your employees are productive and the needs of your current customers are met, but also keep a close eye on the future. There is always the option for virtualization or colocation, but you may not need to invest in more outside services if you have the resources you need already in-house. P

✔ Think Before You Act

"Beware today's 'best practices' techniques," says Christian Pastrana, sales manager at Future Facilities (www.futurefacilities.com). "Things like aisle containment or cabinet blanking are examples of techniques and technologies the industry has come up with to improve design and operational practice, but each facility is different and requires a proper environmental study. When these practices are deployed using a sledgehammer approach and without a proper analysis of the space, we have actually seen instances where they have caused harm to a data center."

✔ Pay Attention To Cable Management

"Route your infrastructure management," says Darin Stahl, lead research analyst at Info-Tech Research Group. "It's not just metering and measuring. Understand your cable management system and keep a better handle on your documentation going forward. If you invest some time and effort into either doing that well up front and committing to it, or investing in a tool that helps you do that, it will save you a whole lot of money and reduce the risk of downtime because of messy cabling or other issues."

BONUS TIPS:

✔ Focus on proper power supply placement.

Get your power distribution as close to the walls as you can, says Darin Stahl, lead research analyst at Info-Tech Research Group. Rather than hard-wiring into racking infrastructures, if you can get your power distribution close to the wall and use flexible whips to distribute power, it will save you money in deployment of racking and also give you some significant flexibility in the future.

✔ Use your available space wisely.

Try to avoid the tendency to jam too much stuff into a room. Stahl advises that you think about how you work in the room and how you bring equipment into the room as well as what kind of access people get to the room. If the racks are too tight, there may not be enough space to actually work in. These kinds of issues are little stumbling blocks that you may end up having to live with further down the road.

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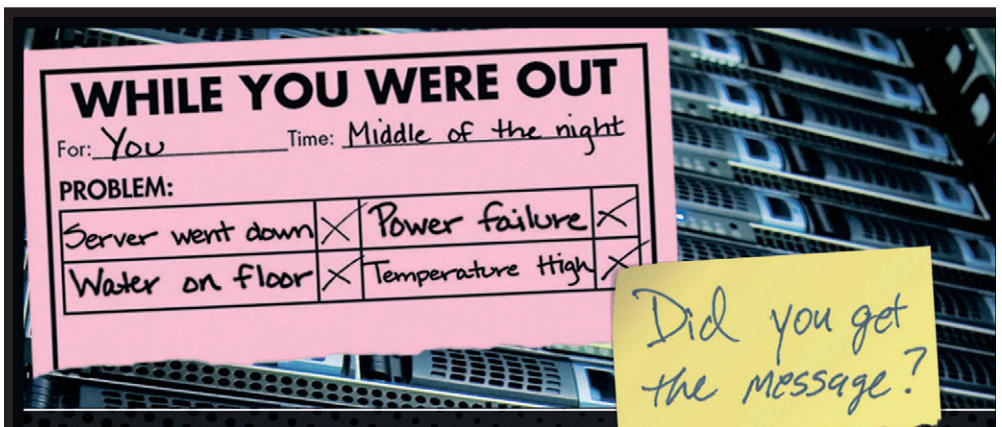

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HOW TO

Determine The Best Storage Approach

Assess Your Needs & Consult With The Pros To Determine The Best Fit

New storage in your data center could be cloud, in-house, or a combination of both. Unless your organization's IT department has current expertise in this important area—or even if it does—it's a good idea to retain the services of a qualified, full-service vendor or consultancy firm.

"Do your homework, but don't over-analyze," says George Crump, senior analyst at Storage Switzerland. "Most vendors have an offering in this space. If [you] talk to everyone, [you] may quickly become overwhelmed."

Crump suggests that you discuss your project with one systems vendor, one new-but-established vendor focused on the mid-range, and one startup.

Evaluation

When narrowing your storage options, careful research is invaluable. "The key to successful IT/storage decisions is doing your homework and understanding the dynamics and priorities of your business needs and strategy," says Jonathan Siegal, senior director of product marketing in the Unified Storage Division at EMC (www.emc.com). "There is no single, one-size-fits-all answer."

First, Crump says, your organization should have a clear goal. "Do [you] need more capacity, more performance, better data protection, [or] some or all of the above?" he asks.

Siegal and Crump agree that your organization needs a solid understanding of several things. For example, Crump says, your company "should inventory the type of data you have today—how much is in databases, email, files, etc." Siegal adds that you'll need to be clear on your company's business requirements, business strategy, and networking strategy, including bandwidth requirements and available facilities and services.

Next, equip yourself. "A good [set of] storage analysis tools is always a wise investment prior to purchasing a new storage system," Crump says. "It answers [many] of the above questions and identifies performance problems."

Use the analysis tools to evaluate how you're currently using your IT resources, Siegal says, both in aggregate and by application—via the app itself or at the server or storage level, as applicable.

"It is important to understand the existing/available capacities (headroom), underutilized storage resources, I/O throughput as a percentage of available based on steady-state and peak loads, and the same characterization in aggregate at the network level," Siegal explains.

Next, give serious thought to how much of the new storage could be in a cloud, whether public (third-party) or private (in-house). Many experts believe private cloud storage becomes more cost-effective than public cloud capacity for data sets larger than 100TB.

Key Concerns

Here are some things to keep in mind as you formulate your strategy:

Data safety. Keeping your precious data safe is vital to profitability, so be sure to implement redundancy and strong error correction, as applicable.

Uptime. Staying up and running is crucial to business continuity. You need reliable devices and software, along with failover protection (meaning both emergency power and redundant data storage systems). You'll also need round-the-clock support from the vendors, relevant manufacturers, and/or developers.

Security. From user access policy to encryption, and from firewalling to malware prevention, data storage security is essential for the future and reputation of your organization.

Speed. How fast your storage works is important, which brings up the topic of SSDs and HDDs. "SSDs should have a role in almost every data center," Crump says. "The analysis will help with that decision as to how much." The exact mix of solid-state and rotating disk drives depends on your data center's needs. For instance, providing cloud applications requires a different approach to storage performance than serving content such as video. "We suggest looking for ways to leverage SSDs across a broad data set via caching, automated tiering, or using VMware's Storage VMotion to migrate performance-sensitive VMs to an SSD appliance," Crump says.

Manageability. "Product selection should include evaluation for usability as well as the requisite features," Siegal says. "The incremental software should be complementary to the chosen infrastructure and leverage the vendor's product capabilities." Your organization may require new software for storage management, data protection, support, and future storage planning, Siegal adds.

Cost-effectiveness. Think of your storage capital expenses not only in terms of cost per gigabyte, but also cost per I/Ops. Deduplication, virtualization, and provisioning features can help you avoid wasting money and power on unnecessary drives. "Products with advanced data management features such as thin provisioning of storage can help reduce initial deployment costs based on efficient use of capacity," Siegal says. As for your operating expenses going forward, bear in mind that power-efficient systems translate to low cost of operation. Systems that are less efficient not only require more power to run, but generate more heat, which has a knock-on effect on your cooling costs.

Scalability. Whichever path you take in your storage quest, make sure that the result will let your data center grow with your organization's needs. "In many cases," Crump says, "[storage analysis] software can also provide insight into data and performance growth rates so [you] know how scalable a system [you] should buy."

Implementation

For most organizations, implementation requires third-party help. That doesn't mean, however, that you should sit back and let the vendor or consultants do all the work.

"We recommend being as involved as possible since it makes transition to ownership of the system easier," Crump says. "In some cases, though, that is not realistic because there are not enough people resources available to sit through the implementation."

IT personnel that have helped roll out the changes will be easier to train, too, and can help train others on the new system. Before you know it, your upgraded data center will be better than ever. P

Key Points

- You'll need to do some research before a storage upgrade.
- Get professional, reputable help as you determine which storage solutions to implement.
- Focus on not only cost and ROI, but also data safety, availability, security, and speed.

Top Tips

- ✔ When you're considering any significant infrastructure changes related to storage, take the opportunity to look at consolidation and/or virtualization of your storage resources, says Jonathan Siegal, senior director of product marketing in the Unified Storage Division at EMC (www.emc.com).
- ✔ George Crump, senior analyst at Storage Switzerland, thinks a hybrid model makes the most sense when it comes to data center storage these days. He defines it as some data onsite backing up first to disk, then archiving to tape with a replication to another disk in a disaster recovery site or to a cloud storage provider. "The relevant mix is dependent on the capabilities of the organization to provide and maintain their own DR site," Crump adds. "The less [capability], the more likely we would recommend a replication to a cloud storage provider."
- ✔ "Solid-state drives . . . have been proven to be a good solution for demanding applications with high I/O profiles," Siegal says. "More importantly, some vendors have embraced SSDs as a tiered element in their storage systems to handle hot data and automatically rebalance the workload/data location as the data profile changes."

Action Plan

- Evaluate your organization's needs.
- Enlist expert help.
- Decide on an approach.
- Implement the solution.
- Train your personnel on the new system.

Get Started

New data center storage requires an investment in time and money. Ballpark costs for a small to midsized data center storage upgrade could be "anywhere from $15,000 to $150,000," according to George Crump, senior analyst at Storage Switzerland.

"The entry point for networked storage components to support an application environment as well as general user storage is likely to be around $15,000, scaling up with requirements for larger capacity or more extensive data management capabilities," says Jonathan Siegal, senior director of product marketing in the Unified Storage Division at EMC (www.emc.com). However, he adds, "systems appropriate to consolidating and sharing user data or for archiving of files can be deployed for under $10,000, and some of these offer the option to add high-availability features later."

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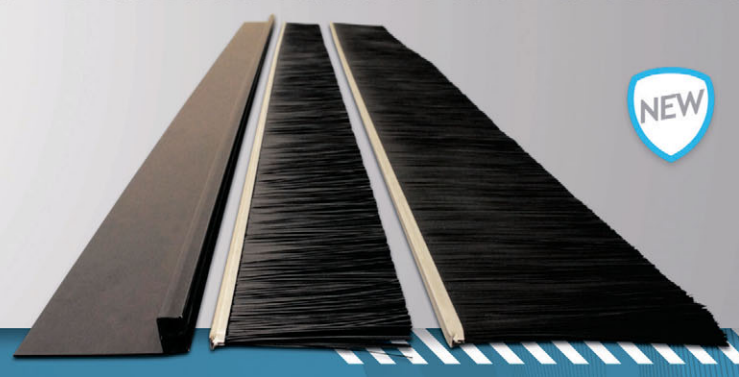

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SIX QUICK TIPS

Unified Communications On A Budget

How UC Components Provide Positive ROI For Businesses

You can't define unified communications (also known as UC) without incorporating the technological benefits of connectivity. Although each vendor may take the liberty to tailor the term to their services provided, UC encompasses the following three components: real-time communications, non-real-time communications, and the strategies an enterprise uses to connect from B2C and B2B.

Because UC utilizes broadband and collaborative tools that are becoming increasingly more cost-effective, departments can organize a team project without consuming every resource within the enterprise. A UC platform can benefit big and small businesses alike by improving customer contact, enhancing VoIP mobility, and reducing the cost of communication management.

✔ Measure The Multitasking Savings

Some people claim that multitasking reduces productivity, but when you consider the advantages of teleconferencing vs. traveling and collaborating online instead of coordinating schedules to physically meet in a room, the time and cost savings offset any downtime that may occur.

For example, Sarah Carter, vice president of marketing at Actiance (www.actiance.com), explains a few of the ways her company's customers have successfully integrated UC technology in the workplace.

"One customer of Actiance's in the UK had their CEO estimate that he saves 20,000 miles a year through the use of his UC platform because he's taking videoconferencing calls instead of driving to remote offices. He's also able to easily have 'Sunday evening' executive calls, where the engagement level is much higher," Carter says. "Videoconferencing drives much more engaged conference calls with a higher degree of successful outcomes, as it enables participants to increase the communications signs that we react to as human beings."

Carter adds that another client uses whiteboarding and videoconferencing to drive innovation across geographically dispersed teams which, in turn, minimizes in-office costs and enables teleworking capabilities without increasing the infrastructure budget.

✔ Look For Wise Cost-Cutting Measures

By addressing where your company stands within its general UC lifecycle, you can determine the best way to interconnect the new communication opportunities. You can do so without breaking the bank when you start with step-up option.

"A cost-effective solution will concentrate on bringing basic call controls to the mobile devices (hold, conference, transfer, etc). As you move up the value curve, these solutions are enhanced with more mobility, customer service capabilities, and management functions, while still remaining cost-effective (if one does their homework)," says Richard J. DeFabritus, senior solutions marketing manager for SME communications at Avaya (www.avaya.com).

✔ Incorporate Live Collaboration Tools

"Collaboration needs are growing daily, and in SMBs that have dispersed people across different locations, video could be a prime solution to ensure continuity, productivity, and effective collaboration on a daily basis," says Richard J. DeFabritus, senior solutions marketing manager for SME communications at Avaya (www.avaya.com). "Increasingly, we see the benefits of video being played out in many different types of companies that have branches, factories, retail stores, and other workers and customers facing collaboration needs."

Tom Toperczer, vice president of marketing at Nefsis (www.nefsis.com), also highlights the importance of live communications. "For productive meetings and knowledge transfer, live sharing and collaboration tools are required. It's good to keep this in mind, as outside cloud-based alternatives [and] collaboration tools are often a separate, chargeable add-on," Toperczer says.

✔ Start Small & Work Your Way Up

A city isn't built in a day, and neither are unified communication systems. So, the start-small-and-expand concept is never advice to readily ignore. In other words, you don't have to connect your Web, voice, mobility, contacts, and voice service all in one day.

According to Tom Toperczer, vice president of marketing at Nefsis (www.nefsis.com), it's easier and less risky to choose a specific application such as training, sales, or inter-office meetings before you overhaul an enterprise's communication management.

"[You can] 'pilot' a simple videoconferencing application [rather] than undertaking a company-wide deployment right from the start," Toperczer says. "In this regard, many cloud-based solutions offer a free trial, and easy expansion is available at the click of a mouse. The alternative, hardware-based installed-site systems require a large capital outlay and become very complex once the limited number of built-in ports are exhausted."

BONUS TIPS:

✔ Mobility Matters

"Mobility truly represents the new wave of how employees are conducting business, and the SME arena now has lots of ways to benefit from communications applications that drive a productive mobility strategy," says Richard J. DeFabritus, senior solutions marketing manager for SME communications at Avaya (www.avaya.com). "Whether employees are on the road, at home, or in the office, having the right mobility tools is essential to help ensure employees have the ability to stay in touch with customers and colleagues from anywhere."

✔ Face Your Challenges

Although you can look at unified communications simply as another communication solution, if you haven't identified the obstacles to this type of project management, here are some issues you might have to address now or in the future:

- **Application performance pitfalls.**
  The end user should be taught that new UC applications may be buggy at first and require a learning curve. Make sure you budget for comprehensive support, so your employees feel comfortable learning new technologies.
- **Unpreparedness for interoperability and integration issues.**
  Different vendors offer different interworking options, so it's important to be aware of how certain solutions will fit into the larger communication infrastructure.
- **Bandwidth taxation.**
  Before you deploy applications, consult your IT department to find out what type of strain new UC tools will place on your existing network. For instance, rolling out a videoconferencing platform across the enterprise will require more network throughput.

✔ Don't Forget Multilayer Security

Threats and vulnerabilities to UC applications are not insurmountable, but that doesn't negate network security vigilance. The following are some of the essentials that should be in place in order to track and analyze your network's security posture in real time: end-to-end encryption, traffic recording, logging, UC policy enforcement, access control authentication, and the firewall.

Carter recommends a UC platform that you can federate to external and third parties because this "allows you to set the controls [and] the security and keeps your users on brand and on message," she says. "Federation with third parties, while blocking the native use of tools, gives you a much more robust security," Carter adds.

✔ Assess Departmental Needs

Every department settles into its own collaboration habits, which is why UC will be unique to each one, though it should remain internally unified. For instance, the sales team that communicates regularly with clients around the world needs to be able to give presentations and show products on mobile devices. The human resources department relies on VoIP solutions and email in order to conduct interviews and recruit new employees. Alternatively, the accounting department needs to have the capability to instant message internally and share storage externally so every employee can edit any number of financial documents. All of these corporate communities must thrive cooperatively using UC without funneling into their own technological silos. P

HOW TO

Improve Your Wireless Coverage

Ensure Optimal Network Range, Connectivity & Performance

As the size and workforce of your company continues to grow, your network will need to be able to support a large number of users and devices over a longer distance. And companies need much more than basic availability. "In today's enterprise, wireless is no longer just a 'nice to have' overlay system for guests," says Koroush Saraf, senior director of product management at Fortinet (www.fortinet.com). "It's now used as the primary method of connecting to the network. New devices such as tablets and laptops no longer ship with wired Ethernet ports, therefore a stable, high-performance wireless network is essential."

It's obvious to most companies that a high-quality wireless network is a necessity, but it may be less obvious how to actually improve the performance of the network. With the help of experts, we'll show you how to spot an underperforming network and provide a few tips on how to get it up to par.

Spot The Telltale Signs

When it comes to any performance-related issue in a business environment, there are obvious indicators as well as others that are not as easy to spot. For instance, spotty connectivity and low download or upload speeds are clear indications that a network could use some work. But if your employees are accustomed to this type of performance, they may not even report an issue. The key is finding out which tasks or applications are affecting network performance, which could point to a hardware or software issue rather than a problem with coverage.

"The difference between a good and great wireless network may not be as obvious as the difference between a good and bad one," says Zak Wood, director of global marketing at TRENDnet (www.trendnet.com). "We've all experienced slow page load times, download timeouts, and extremely slow document load times due to slow connections. And due to the strong migration toward the use of video in the enterprise space, bandwidth-heavy video lag is a common experience, as well."

Determine The Needs Of Individual Departments

To dig even further into your workforce's experience with the network, you should look at each department separately to assess their coverage needs. "Sales, marketing, and Web teams may require high-performance wireless connections due to their intensive Internet usage, whereas the accounting department may only require a dependable wireless connection," Wood says. "Conversely, the shipping department may not require a high-speed connection, but still be interested in a zero downtime wireless network so that they can continue to process shipments even if there is a power outage."

After you've determined your company's departmental needs, you may be able to solve your coverage problems by providing each segment with its own wireless network or access point. By individualizing your wireless network connections, you will lower the number of users on each access point, localize the coverage area and range of the network, and improve the overall performance on a department by department basis.

Assess The Wired Backbone & Wireless Ecosystem

If you find that your wireless coverage and network performance is suffering, don't forget that there could be a hardware issue with your wired infrastructure. "Oftentimes, a slow wireless experience is caused by the network backbone," Wood says. "A given company may need to upgrade their ISP bandwidth or there may be a routing bottleneck on the wired side, which bogs down everyone's network experience."

In addition to data center-related hardware issues, there could be localized problems on individual computer systems. Wood recommends documenting the supported speeds of desktops, laptops, and other devices to determine whether or not they should be upgraded. He also says companies should "map the upload and download speeds supported in each departmental area during peak usage times," which will give you an indication of where your wireless network should be for optimal performance. For instance, you may need to install a new wireless adapter in your laptop that provides better wireless range and more stable connectivity.

Consider Wireless Roaming Coverage

If you decide that segmenting your network into a series of smaller access points isn't the right approach for your company, then you could also consider wireless roaming coverage, which "allows wireless users to gain network resources and/or Internet access throughout their office space," according to Wood.

Wireless roaming gives users equal access to the network regardless of where they are in the building and allows them to move from one room to the next without interruption. Wood also recommends upgrading all access points to Wireless-N and integrating "data security to prevent unauthorized access." This solution should give your entire workforce access to a high-speed Internet connection without the need for a massive infrastructure overhaul. P

Key Points

- Recognize the signs that your wireless coverage and network performance may not be as good as it could be. Ask your employees about their experience and determine departmental needs.
- Monitor the wired backbone of your network to ensure there isn't a hardware problem deeper inside the company. Then, look into the possibility of issues with individual computers and determine whether or not component upgrades are necessary.
- Consider wireless roaming coverage, constant connectivity, and additional access points as solutions to coverage issues throughout your building.

Action Plan

The following steps were provided by Koroush Saraf, senior director of product management at Fortinet (www.fortinet.com):

- First, determine whether there are any problems with your wireless coverage. It's a good idea to start by asking employees whether they are having difficulty connecting.
- Then, determine the source of the problem. In many cases, the source is not the wireless network, but either a device that has a sub-par Wi-Fi card or old drivers. There may also be some interference from other nearby access points or devices using the same spectrum.
- Perform an active site survey to determine the Wi-Fi interference sources and determine coverage.
- If coverage holes are found, upgrade to 802.11n and deploy additional access points.

Get Started

"A simple way to get started is to survey their employees about the quality of the wireless network," says Koroush Saraf, senior director of product management at Fortinet (www.fortinet.com). "We have found that many employees just think that wireless should be slow and intermittent so they don't complain. Be very explicit in your questionnaire and ask whether there are areas of the building that they have experienced no coverage or a slow network connection."

Top Tips

The following tips were provided by Koroush Saraf, senior director of product management at Fortinet (www.fortinet.com):

- ✔ Determine whether there are any clients that have connection issues by looking at the wireless controller user interface.
- ✔ Determine whether there are any clients with a weak signal or clients that keep dropping and reconnecting and identify clients that have a very low connection speed.
- ✔ If you find that your existing access points are overloaded, then it may be time to add more. Plan for a maximum of 30 clients per radio.
- ✔ Use a centralized wireless controller solution. A view of your overall network health will go a long way in helping you diagnose and address potential coverage issues.

SIX QUICK TIPS

Incorporate Tablets Into The Enterprise

Make Sure You Have A Strong Business Case For Tablets

The considerations involved with procuring tablets for enterprise deployment are numerous. Beyond network, data security, application, cost, support, and platform issues to mull, IT must consider if there's even a strong business case to make for tablets in terms of whether employees will benefit from having them. As Christian Kane, Forrester Research analyst, says, "Enterprises shouldn't just get tablets to get tablets; they should be adopting them for specific employees who will benefit from them."

✔ Pick A Platform

Andrew Borg, research director for Enterprise Communications at Aberdeen Group, says that, for enterprises, the iPad has emerged as the reference tablet standard due in part to its manageability and its unified hardware platform. Particularly for small IT departments, he says, the fracturing of the Android platform can prove problematic, whether they're procuring tablets themselves or operating under a BYOD model.

Still, Android can be preferable in some situations, he says, though primarily for organizations obtaining and managing all tablets themselves. In that case, fracturing is less of an issue because SMEs can go with one vendor and have one support line while controlling applications and, perhaps more importantly, the Android OS version running on the tablet. The minute that employee-owned Android tablets are added to the mix, he says, the platform's appropriateness for SMEs "goes way down, rapidly," due to the potential of IT having to handle various OS versions and the lack of a consistent approach to malware, security, and data-loss prevention for the platform. "The complexity begins to multiply quickly on the Android platform," Borg says. "Whereas on the iPad there's one size, one current OS, one vendor, and the tools provided to enterprises to manage and deploy are well-proven and capable right now."

✔ Seek Employee Input

Obtaining employee input is imperative when weighing tablet choices. The best approach, Kane says, is asking employees about their preferences, how they work, and which tools they need to do their jobs. "The goal is to improve productivity and efficiency and help people get their jobs done," he says. He adds that employees generally want to provide input concerning issues they're experiencing and how to improve them. "Ultimately, one side shouldn't dictate everything; it really should be a decision that's made with influence from both parties, and understanding the behaviors and the needs of both sides is the best way to do this."

Borg says acquiring end-user input is important. Ultimately, he says, usability and end-user experience define a program's success. Acquiring end-user input on tablets and smartphones presents different challenges than input on laptops for small IT departments, however, as obtaining input for laptops really isn't necessary because laptops are essentially movable desktop systems that have become highly standardized over time where OS, platform, and core business productivity applications are concerned. Unlike with tablets, "it isn't about personalization, what apps you've loaded, how cool or sexy it is to carry around, or really about battery life," he says. In terms of mobile usage, he says, tablets are "much more like a smartphone than a laptop." As a result, usability, app usage, battery life, and end user experience are more important and play a bigger role in a deployment's success.

✔ Everyone Needs A Strategy

Borg believes every SME should have a well-established, enforceable mobile-device policy in place, whether or not the business plans to deploy tablets. To illustrate why, he cites recent data from a separate firm proclaiming that the total number of tablets in the United States nearly doubled during a one-month period at 2011's end. "Having a strong enforcement policy prohibiting BYOD on tablets is one way to keep the Barbarians at the gate, if you will." Without such a policy, he says, "trust me, there will be employee-owned tablets trying to access corporate-owned email right now."

For example, he says, even if employees bringing tablets to work don't intend to use them for work purposes, every tablet entering the enterprise is "pinging for a Wi-Fi connection without the user requesting that capability. The default is 'connect to available Wi-Fi,'" he says. "I'm not saying they will be successful, but I am saying whether IT wants it or not, there are already devices trying to access the network."

✔ Shore Up Security

Mobile platforms generally still leave much to be desired in terms of application control, says Kane. Add in cloud-connected applications and there's potential for data leaks. "Virtualization can help with certain applications, but a lot of security practices are going to have to include user education. Users need to know not to put sensitive material in places the company can't control," he says. Advising employees about proper application usage can help, he says, but in general, potential data leaks are "why so many firms are limiting initial access to contacts, calendar, and email and maybe virtualized apps."

Borg says the first step to addressing mobile security is developing a comprehensive MDM (mobile device management) strategy that incorporates tablets, smartphones, and cell phones, and that clearly delineates which devices will and won't be permitted access to corporate email, email attachments, software applications, malware protection, and other corporate assets. Whereas it's possible IT hasn't revisited the enterprise's laptop usage policy in years ("if they even have one in place"), he says, IT "cannot afford to be complacent with mobile devices." Here, a more comprehensive EMM (enterprise mobility management) solution vs. a pure MDM solution is appropriate, he says. "If you stop at MDM, you stop at the easy part," he says, as you're "overlooking the biggest risks to enterprise assets, because it's not about controlling the device ultimately– it's about controlling the data on the device." P

✔ Are Applications Available For What You Need?

A top consideration when deciding if incorporating tablets makes sense, says Forrester Research's Christian Kane, is determining if applications are available to accomplish desired tasks. "If you have an idea of who will use them and what they will use them for, you'll know if there are available applications," he says. "In general, native apps are still developing, but there are plenty of them already out, and Web apps are something that allow you to care less about the platform on the device, which is nice."

✔ No Silver Bullet

"Tablets won't be the silver bullet to solving all mobility problems," says Forrester Research's Christian Kane. "They will be right for some employees and wrong for others." Thus, he advises to begin deployment with pilot programs and understand that "the platforms themselves are still very immature." "Deliver what you can today given the immature technology, security and management requirements, and the status of current hardware/software lifecycles and then expand as you can," he says.

BONUS TIPS:

✔ Beware of hidden costs.

Beyond financial costs related to procuring tablets, there are other costs to consider, as well. Rob Enderle, Enderle Group principal analyst, says these can include tablets becoming a distraction, hosting viruses, and representing a theft risk. Further, he says, "users like to show them off," thus increasing the chances of others acquiring company data.

✔ Consider enterprise mobility management.

Particularly for small, overworked IT departments, Aberdeen Group's Andrew Borg says a fully integrated enterprise mobility management solution that oversees management of the tablet and data on it is a good fit. "There's a whole variety of pricing models and capability sets that really can meet almost any need," he says. Options include flavors of cloud-based, on-premises, and hybrid solutions and evergreen and per-seat licensing arrangements.

HOW TO

Manage Employee Departures

Protect The Business During Employee Separation

Before the advent of IT, it was very difficult for a departing employee to exit with sensitive company information, unless they were able to carry loads of paper files without anyone noticing. Now that information is conveniently digitized and portable, it is easier than ever for departing employees to surreptitiously carry off sensitive intellectual property. Also, if careful procedures are not followed when employees depart, administrators could inadvertently allow departing employees to walk away with access to key systems—especially employees working in IT.

Involuntary terminations further complicate the danger of information theft, because an employee that is involuntarily terminated may have an axe to grind and could be looking for ways to hurt his former employer. Even employees who voluntarily depart may be tempted to either steal intellectual property or retain access to key systems for financial gain. Fortunately, there are a variety of approaches administrators can take to ensure the separation process is thorough and complete.

Have A Plan In Place

Managing employee departures is, at first blush, a common-sense task: When an employee departs, his access to all company systems, information, etc., is terminated. But as usual, the devil is in the details.

For example, many businesses don't have policies and procedures in place to consistently and effectively manage employee departures. A key component is establishing a response plan for handling terminated employees that can be executed at the same time the employee is going through the separation process, says Joe Fisher, president of Affinity IT Training (www.affinity-it.com). The plan should clearly lay out the steps required to secure assets managed by departing employees, including changing passwords for all systems and accounts the departing employee managed, such as network and data devices, operating systems, and applications.

Once the plan is executed and the employee has departed, it is wise to conduct a system audit and look for malicious items such as viruses, logic bombs, and backdoor accesses. Host-based intrusion systems can help with this task; in addition, it's also important to segregate duties to avoid carte blanche access to critical systems, Fisher says.

Of course, he adds, the plan must be developed, contain enough detail about employees' systems access, and be able to be executed quickly by administrators.

Retrace The Trail

When approaching employee departures from an IT and security perspective, administrators should think about the processes developed to manage employee arrivals, says Joel Schneider, president of Liberty Technology Advisors. When new employees start, the on-boarding process includes a list of items and systems the employee receives access to, such as phones, office keys, systems access (email, accounting, customer service, etc.), and electronic entry badges.

The off-boarding process should be the exact reverse of the on-boarding process, Schneider says. Access enabled by items such as tablets and smartphones should be terminated, and all company resources such as laptops, tablets, and smartphones should be returned to human resources or to the employee's immediate supervisor.

Trust, But Verify

In today's world, highly qualified individuals may skip from company to company with ease, so it is often difficult to surmise who is in it for the long haul and who is looking to leave. However, it is critical that administrators understand their workforce and tailor their processes accordingly.

For example, Affinity IT Training's Fisher says, whenever employers detect any hint of dissatisfaction or restlessness in an employee, the employee should immediately be placed on a monitoring list so her actions can be reviewed by supervision. Frequent—and random—auditing can help monitor employee activities and detect anomalies, even when an employee's intentions are not known.

When an actual termination occurs, employees should be allowed to retrieve personal items while escorted by security, Fisher says. If possible, an exit interview should be conducted so the employee's physical exit can be delayed while the employee departure response plan is executed, he adds. The idea is to ensure that the plan is executed and all access is terminated before the employee walks out the door. The plan must be thorough enough to ensure that no stone is left unturned.

Don't Forget About The Phones

Employers managing workforce departures must consider the ins and outs of mobile phone usage. This is an area that can be easily overlooked and cost an employer a lot of money in undetected and ongoing charges.

According to Bzur Haun, CEO of Visage Mobile (www.visagemobile.com), most employers don't consider the costs behind plans and features that remain active; in some cases, employers may even continue to pay for mobile phone access costs for departed employees. These situations can cost a company much more than the fees paid to support an active employee using a mobile account.

Other Considerations

As soon as it becomes known that an employee is departing, the IT staff should be informed so that access to key systems can be shut down, says Alan Wlasuk, CEO of 403 Web Security (403.wddinc.com). At that time, a review of all company systems the employee has access to should be conducted so that a checklist can be developed for use during the employee's final day.

On that final day, administrators must collect all company IT hardware, cancel employee access to all company systems, and change the passwords used by the employee for access. Beyond changing passwords on all email accounts used by the employee, Wlasuk also recommends briefly redirecting the employee's email to a manager so suspicious behavior can be detected promptly. Even passwords to seemingly benign Internet applications accessed by the employee, such as the company Web site, should be changed.

Any computers used by the departing employee could be potential sources of malware, such as keyloggers. These computers should be checked so the possibility of maliciously transferring information from the computer(s) to an external party can be eliminated, Wlasuk adds.

Jon-Louis Heimerl, director of strategic security for Solutionary (www.solutionary.com), says monitoring system use for aberrant behavior is more important than ever during layoffs. If a termination turns hostile, access to most systems should be disabled before the employee is told if at all possible. Full account revocation is the single best thing to do, he concludes. P

Key Points

- Employee departures, if not properly managed, can result in data/intellectual property loss and potential unauthorized access to critical systems.
- Planning policies and processes covering departure management is the best way to be consistent and protect the business.
- Coordination between access revocation and physical removal of the employee from the premises is critical to ensure a smooth transition.

Top Tips

- ✔ Departing employees should be treated with respect, but consistency with policies and processes that protect the business must be maintained, says Alan Wlasuk, CEO of 403 Web Security (403.wddinc.com).
- ✔ A business should be operated on a "need to access" policy, not on freedom of information. Wlasuk says most companies do a very poor job in this area.
- ✔ Jon-Louis Heimerl, director of strategic security for Solutionary (www.solutionary.com), says businesses should create a contract between employee and employer specifying that misuse of corporate information could result in civil penalties against the former employee if that contract is violated.

PROCESSOR

Upcoming **IT** *Events*

Network With Your Peers At These IT Training & Association Meetings Across The United States

JUNE

SpecTECHular 2012
June 16
New Horizons Cincinnati
10653 Techwoods Circle
Cincinnati, Ohio
register.nhcomputerlearning.com
/Events/

Organization In Outlook Made Simple
June 19, 10 to 11 a.m.
New Horizons South Dakota
4610 Technopolis Drive, Suite 100
Sioux Falls, S.D.
register.nhcomputerlearning.com
/Events/

AITP Atlanta
June 21, 5:30 to 8 p.m.
Crowne Plaza Ravinia
4355 Ashford Dunwoody Road
Atlanta, Ga.
www.aitpatlanta.org

AITP Akron
June 26
Akron, Ohio
www.akron-aitp.org

ISSA Baltimore
June 27
Concurrent Technologies Corp.
8530 Corridor Road
Savage, Md.
www.issa-balt.org

SpecTECHular 2012
June 28
New Horizons Dayton
1890 Commerce Center
Fairborn, Ohio
register.nhcomputerlearning.com
/Events/

JULY

AITP Pittsburgh
July 9, 5 to 8 p.m.
Silvioni's Restaurant
2125 Babcock Blvd.
Pittsburgh, Pa.
www.aitp-pgh.org

AITP Washington, D.C.
July 12
Alfio's
La Trattorio Restaurant
4515 Willard Ave.
Chevy Chase, Md.
www.aitpdc.org

SpecTECHular 2012
July 17
New Horizons Fort Worth
4100 International Plaza
Suite 200
Fort Worth, Texas
register.nhcomputerlearning.com
/Events/

SpecTECHular 2012
July 24
New Horizons
San Antonio
2727 NW Loop 410
Suite 103
San Antonio, Texas
register.nhcomputerlearning.com
/Events/

SQL Coding Best Practices and Shortcuts
July 24, 9 to 11 a.m.
New Horizons South Dakota
4610 Technopolis Drive
Suite 100
Sioux Falls, S.D.
register.nhcomputerlearning.com
/Events/

ISSA Baltimore
July 25
Concurrent Technologies Corp.
8530 Corridor Road
Savage, Md.
www.issa-balt.org

SPTechCon
July 25
Boston, Mass.
www.sptechcon.com

AUGUST

AITP Washington, D.C.
Aug. 9
Alfio's La Trattorio Restaurant
4515 Willard Ave.
Chevy Chase, Md.
www.aitpdc.org

SpecTECHular 2012
Aug. 9
New Horizons
Kansas City
9611 E. Metcalf Ave.
Overland Park, Kansas
register.nhcomputerlearning.com
/Events/

AITP Pittsburgh
Aug. 13, 5 to 8 p.m.
Silvioni's Restaurant
2125 Babcock Blvd.
Pittsburgh, Pa.
www.aitp-pgh.org

SpecTECHular 2012
Aug. 21
New Horizons
Oklahoma City
3010 NW 149th St.
Oklahoma City, Okla.
register.nhcomputerlearning.com
/Events/

ISSA Baltimore
Aug. 22
Concurrent Technologies Corp.
8530 Corridor Road
Savage, Md.
www.issa-balt.org

SpecTECHular 2012
Aug. 28
New Horizons South Dakota
4610 Technopolis Drive
Suite 100
Sioux Falls, S.D.
register.nhcomputerlearning.com
/Events/

SEPTEMBER

AITP Pittsburgh
Sept. 10, 5 to 8 p.m.
Silvioni's Restaurant
2125 Babcock Blvd.
Pittsburgh, Pa.
www.aitp-pgh.org

AITP Washington, D.C.
Sept. 13
Alfio's La Trattorio Restaurant
4515 Willard Ave.
Chevy Chase, Md.
www.aitpdc.org

ISSA Baltimore
Sept. 19
Concurrent Technologies Corp.
8530 Corridor Road
Savage, Md.
www.issa-balt.org

AITP Cornhusker
Sept. 20, 5:30 p.m.
Lincoln, Neb.
www.aitp.org/members/group
.asp?id=75767

Upcoming IT Events

PROCESSOR

AITP Akron
Sept. 25
Akron, Ohio
www.akron-aitp.org

Data Center World
Sept. 30-Oct. 3
Gaylord Opryland
Nashville, Tenn.
www.afcom.com

OCTOBER

Interop
New York
Oct. 1-5
Javits Convention Center
New York, N.Y.
www.interop.com

AITP Pittsburgh
Oct. 8, 5 to 8 p.m.
Silvioni's Restaurant
2125 Babcock Blvd.
Pittsburgh, Pa.
www.aitp-pgh.org

AITP
Washington, D.C.
Oct. 11
Alfio's La Trattorio Restaurant
4515 Willard Ave.
Chevy Chase, Md.
www.aitpdc.org

AITP Cornhusker
Oct. 18, 5:30 p.m.
Lincoln, Neb.
www.aitp.org/members/group
.asp?id=75767

ISSA
Baltimore
Oct. 24
Concurrent Technologies
Corp.
8530 Corridor Road
Savage, Md.
www.issa-balt.org

WPDevCon
Oct. 24
San Francisco, Calif.
www.wpdevcon.net

AITP Akron
Oct. 30
Akron, Ohio
www.akron-aitp.org

NOVEMBER

AITP
Washington, D.C.
Nov. 8
Alfio's La Trattorio Restaurant
4515 Willard Ave.
Chevy Chase, Md.
www.aitpdc.org

AITP Pittsburgh
Nov. 12, 5 to 8 p.m.
Silvioni's Restaurant
2125 Babcock Blvd.
Pittsburgh, Pa.
www.aitp-pgh.org

AITP Cornhusker
Nov. 15, 5:30 p.m.
Lincoln, Neb.
www.aitp.org/members/group
.asp?id=75767

ISSA
Baltimore
Nov. 28
Concurrent Technologies Corp.
8530 Corridor Road
Savage, Md.
www.issa-balt.org

DECEMBER

Android
DevCon IV
Dec. 7
San Francisco, Calif.
www.andevcon.com

AITP
Pittsburgh
Dec. 10, 5 to 8 p.m.
Silvioni's Restaurant
2125 Babcock Blvd.
Pittsburgh, Pa.
www.aitp-pgh.org

AITP
Washington, D.C.
Dec. 13
Alfio's La Trattorio Restaurant
4515 Willard Ave.
Chevy Chase, Md.
www.aitpdc.org

ISSA
Baltimore
Dec. 19
Concurrent Technologies Corp.
8530 Corridor Road
Savage, Md.
www.issa-balt.org

AITP
Cornhusker
Dec. 20, 5:30 p.m.
Lincoln, Neb.
www.aitp.org/members/group
.asp?id=75767

Do you have an event you'd like to see listed?

Send an email to feedback@processor.com.

Tips For Buying Used & Refurbished Equipment

Know Your Options For Getting Rid Of Used Equipment

One of the most common methods for getting rid of used equipment is a fire sale, but many data centers will need to be conscious of who they are selling to.

"A less time-consuming method is to sell to one of the many companies that exist by buying used servers and equipment and refurbishing them," says Brett Femrite, director of business development for Rackmount Solutions (866/207-6631; www.rackmountsolutions.net). "Bear in mind, often you will receive pennies on the dollar for this equipment, but normally the buyer will pay to pick it up and ship it to their facility and get it off your hands."

Another option is an asset recovery program, which is a service that performs both the IT asset buyback as well as the physical recycling of hardware. Some vendors will even create a fund for your organization so that the money you gain from selling used hardware can be used to purchase recertified equipment when you need new hardware.

What Equipment Makes Sense To Buy Used?

Resellers of used and refurbished equipment have access to a wide selection of products, stretching from today's models to equipment that's several years old. Enterprises looking for low prices can find great deals on the used market.

But what equipment is a safe bet to buy used? A handful of common items are among those often recommended as good buys on the secondary market:

- Networking equipment such as firewalls, routers, and switches. These items are generally easy to incorporate into existing environments, and the amount of product in inventory means that data centers have their pick of models, capabilities, and price points.
- Disk storage is in high demand and enjoys a brisk trade on the secondary market. Buyers looking for something specific shouldn't have trouble locating their preferred flavor.
- Refurbished servers offer more bang for your buck when compared to buying new. The range of manufacturers and models available through resellers is vast, so buyers are almost certain to find what they need.

Evaluate Your Options When It Comes To Data Destruction

With an onsite data destruction service, you'll remove the need to deal with a chain of custody documentation, which can become a legal burden and add complexity to the job. For data centers that store a lot of sensitive data and want to physically destroy the data, you'll enjoy the peace of mind that comes with watching the destruction take place. With an onsite data destruction service, the vendor will provide all the equipment necessary to handle your storage equipment.

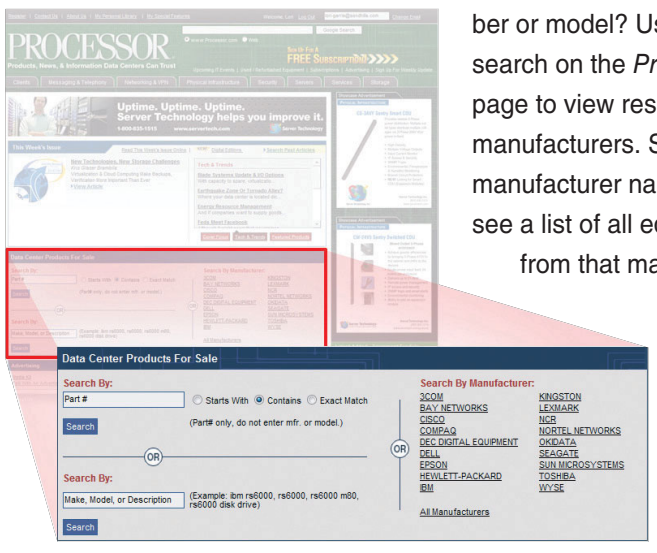
However, some data destruction services offer more powerful shredders at their facilities than mobile shredder services can offer. So if you want absolute destruction that's beyond any type of recovery, an offsite data destruction service may be ideal.

A number of offsite data destruction services also double as a reprocessing center that can remarket the parts, so you can get some return value for your used equipment. With such a transaction, reputable data destruction services will record all inventory information and data removal for your auditing and accountability needs. According to Morris Scott, president of DMD Systems Recovery (877/777-0651; www.dmdsystems.com), "End-of-life recycling is good for the environment; reuse is better—25 times better—and reuse means adding an extra three years of life to IT equipment." Reselling also means that schools, charities, and low-income families will benefit from your old equipment, rather than the simple destruction of the drive.

Use Processor.com To Find Used & Refurbished Equipment

Once you've made the decision to purchase used or refurbished equipment, finding the equipment you need is easy with *Processor*'s online Data Center Products For Sale Database.

From *Processor*'s home page (www.processor.com), you can search for a specific part number, make, model, or description. Enter the information in the appropriate box and click Search. You'll see a list of available equipment. If you don't see the particular piece you're looking for, scroll to the bottom of the search results page to conduct a more detailed search. There, you can search by part number, model, price, location, and more.



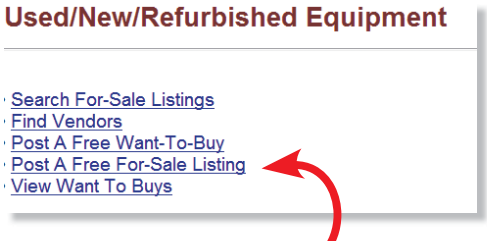
Don't know the specific part number or model? Use the drill-down search on the *Processor* home page to view results from specific manufacturers. Simply click the manufacturer name, and you'll see a list of all equipment listings from that manufacturer.

Do you have excess equipment?

Post it for sale on Processor.com!

On the Processor.com home page, click Used/Refurbished Equipment.

Choose Post A Free For-Sale Listing.



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PDU Cables™
Innovator in data center efficiency

PDU Cables is the leading supplier of power distribution cables assemblies to data centers in North America. PDU Cables has been serving this industry since 1981 and is the first independent cable assembly company to introduce colored conduit into the power distribution cable market, the first to get UL 478 listing, and the first to introduce the Power Cable and Equipment Configurator software tool. The company is centrally located in Minneapolis, Minn., allowing it to offer 24-hour turnaround and shipping time of just one or two days to almost any United States destination.

Products Sold:

A range of power cables, cable seals, and power cord assemblies.

(866) 631-4238 I www.pducables.com

Physical Infrastructure

MOVINCOOL®
THE #1 SPOT COOLING SOLUTION

The MovinCool division of DENSO Sales California has pioneered the use of portable air conditioning solutions for a variety of North and South American markets since 1982. MovinCool works with a national network of distributors and suppliers to provide product sales, installation, and rental.

Products Sold:

- Office Pro Portable Air Conditioner Series for indoor environments such as server and telecom rooms
- Classic & Classic Plus Portable Air Conditioner Series for moisture removal, outdoor and industrial spot-cooling
- CM Series ceiling-mounted A/C for cooling server rooms, telecom closets, or anywhere space is limited

(800) 264-9573 I www.movincool.com

Physical Infrastructure

SENSAPHONE®
REMOTE MONITORING SOLUTIONS

Sensaphone has been designing and manufacturing remote monitoring systems for more than 25 years and has more than 300,000 of its products in use. Sensaphone's product lineup offers a full range of devices with a broad number of features and applications designed to monitor your entire infrastructure and alert you to changes. All product engineering functions, including hardware and software design and circuit board layout and assembly, are performed at the Sensaphone facility in Aston, Penn.

Products Sold:

Remote monitoring solutions that provide email and voice alarm notification for problems related to temperature, humidity, water detection, power failure, and more.

(877) 373-2700 I www.sensaphone.com

Physical Infrastructure

AVTECH

AVTECH Software, founded in 1988, is focused on making the monitoring and management of systems, servers, networks, and data center environments easier. AVTECH provides powerful, easy-to-use software and hardware that saves organizations time and money while improving operational efficiency and preparedness. AVTECH products use advanced alerting technologies to communicate critical status information and can perform automatic corrective actions.

Products Sold:

A full range of products that monitor the IT and facilities environment, including temperature, humidity, power, flood, room entry, and UPS

(888) 220-6700 I www.AVTECH.com

Physical Infrastructure

CABLESYS®

Cablesys, headquartered in La Mirada, California, is a leading manufacturer of high performance fiber cables, fiber jumpers, CAT 6 patch cords, CAT 5e patch cords, CAT 6 cables and connectivity solutions. We have millions in stock that can be shipped same day and best of all, 20% less than name brands.

Products Sold:

- Fiber Optic Cables
- Fiber Patch Cords
- Networking Patch Cords
- Telephone Line Cords
- Audio and Video Cables
- Mini Coax Cables

Custom Cable Assemblies:

- Pre-bundled Cable Assemblies
- Trunk Cable Assemblies
- Multi-strand Cable Assemblies
- Pre-labeled and Pre-kitting
- OEM Cable Assemblies

(800) 555-7176 I Cablesys.com/pro

Physical Infrastructure

LINDY®
CONNECTION PERFECTION

LINDY USA specializes in cables, adapters, electronics and accessories for computer, networking and audio video applications. Since 1932 Lindy has supplied high quality interconnects to customers in commercial, telecom and residential markets. What sets us apart is our complete dedication to innovation, performance and reliability. Our cabling products are truly outstanding.

Products Sold:

• Networking Products • Audio / Video • KVM • Sharing, Converting, Extending • USB and FireWire • Input Devices • Add-On Cards • Hardware and Security • Power • Cabless • Adapters and much more!

(888)-865-4639 | www.lindy-usa.com/

Physical Infrastructure

hergo TECHNICAL WORKSPACE SOLUTIONS

Based in New York City, Hergo Ergonomic Support Systems is an independent designer and manufacturer of enclosure cabinet solutions, technical computer furniture, and modular racking systems. The company's products are designed to promote organization in the workspace and to increase the productivity of computers, peripherals, and communications equipment. Hergo is known for its high-quality products and superior customer service.

Products Sold:

- Racks
- Enclosures/cabinets
- Motorized workstations
- Flat-panel arms
- Computer desks
- Cable management
- Power management

(888) 222-7270 | www.hergo.com

Physical Infrastructure

PDUs direct

PDUsDirect.com is a Master Distributor of select Server Technology PDUs for server and networked environments. PDUs Direct's basic, metered, and switched Rack PDUs provide local and remote power management, power monitoring, and environmental monitoring. We pride ourselves in offering industrial-grade quality products at the lowest prices, with the fastest shipping (most orders shipped within 24 hours) and simplest purchase process. We are the Power Behind the Business.

Products Sold:

A complete line of metered and basic PDUs, and 20A switched PDUs.

(888) 751-7387 I pdusdirect.com

Physical Infrastructure

BayTech®

BayTech was founded in 1976 and, since the 1990s, has developed unique products for remote power management. The company uses printed circuit board instead of wires for a better, more resilient connection between the data center equipment and the receptacle. BayTech provides an extensive Web site with brochure downloads, warranty information, and reseller support and also offers evaluation units for data centers.

Products Sold:

- Power control, distribution, management, and metering
- Power transfer switches
- Console management and remote site management

(800) 523-2702 I www.baytech.net

Physical Infrastructure

temperature@lert

Temperature@lert is a leading provider of low-cost, high-performance temperature monitoring products designed to provide early warning of temperature changes before it's too late. The company's goal is to deliver products that can eliminate your worries about system malfunctions or product damage due to temperatures. The Boston, Mass.,-based company has sold more than 10,000 products to customers in 40 countries.

Products Sold:

A full line of temperature monitoring products, including the Temperature@lert USB Edition, WiFi Edition, and Cellular Edition

(866) 524-3540 I www.temperaturealert.com

Storage

ABERDEEN SERVERS AND STORAGE

Founded in 1991, Aberdeen is a leading manufacturer of servers and storage options for IT departments. Aberdeen products can be found in many of today's high-tech corporations, as well as government agencies, hospitals, and universities. Aberdeen prides itself on unmatched customer service, open and honest communications, long-term commitments to working relationships, and personal and professional integrity.

Products Sold:

- Components/parts
- Servers (barebones, custom, rackmount, and storage)
- Software
- Storage (DAS, iSCSI SAN, JBOD, NAS, SAN)

(800) 500-9526 I www.aberdeeninc.com

Storage

OCZ Technology

The OCZ Technology Group has been offering enterprise class solutions for many years and OCZe (OCZ enterprise) represents the company's offerings that cater specifically to the unique needs of both Enterprise and OEM clients. These innovative products are designed and manufactured to solve problems and deliver improved total cost of ownership (TCO) to clients requiring enterprise class solutions.

Products Sold:

- Solid State Drives
- Power Management

(408) 733-8400 I oemsales@oczenterprise.com

Storage

WeBuyUsedTape.net

WeBuyUsedTape has been in the business of purchasing new, used, excess, and surplus magnetic media for more than 35 years. Our regulation-approved, secure data eradication processes and environmentally friendly disposal programs give organizations a safe and economic incentive for recycling used media. Customer service is one of our top priorities, backed by helpful, knowledgeable, and efficient team members. Obtain a no-obligation, confidential quote on your tape media today. Onsite data destruction available.

Services Offered:

Tape media buyback, secure data eradication, media disposal, and recycling

(800) 821-1782 I www.WeBuyUsedTape.net

Servers

CHENBRO

Chenbro is a leader in enclosure solutions, selling its products primarily to system integrators and OEM and channel partners. The company's extensive research and development efforts help it to keep its competitive edge and maintain market leadership, with special focus on thermal, EMI, and acoustic solutions. Taiwan-based Chenbro has offices in the United States, UK, The Netherlands, and China.

Products Sold:

- A comprehensive line of PC chassis, server/workstation chassis, rackmount chassis, and HDD enclosures.

(909) 947-3200 I www.chenbro.com

Servers

SUPERMICRO®

Supermicro® (NASDAQ: SMCI), the leading innovator in high-performance, high-efficiency server technology ,is a premier provider of advanced server Building Block Solutions® for enterprise IT, data center, cloud computing, HPC, and embedded systems worldwide. Supermicro is committed to protecting the environment through its "We Keep IT Green®" initiative by providing customers with the most energy-efficient, environmentally-friendly solutions available on the market.

Products Sold:

- Servers
- Motherboards
- Chassis
- Network switches
- Storage solutions
- Blade servers
- GPU servers
- Embedded

(408) 503-8000 I www.supermicro.com

Clients

dtSearch® www.dtsearch.com

Maryland-based dtSearch started research and development in text retrieval in 1988. The company is known for speedy adoption of new programming standards, OSes, and file types. Plus, it has a flexible licensing model. Typical corporate use of dtSearch includes general information retrieval, Internet and intranet site searching, and email archiving and email filtering.

Products Sold:

Text retrieval products, including:

- Desktop With Spider
- Network With Spider
- Publish For CD/DVDs
- Web With Spider
- Engine For Win & .NET
- Engine For Linux

(800) 483-4637 I www.dtsearch.com

Equipment Dealer

PaceButler corporation

- PaceButler buys used cell phones.
- In business since 1987
- Redeploy your used phones after upgrade
- Donation option – directly to the non-profit of your choice
- Dedicated to customer satisfaction
  - A+ Rating with the Better Business Bureau
  - Payment issued in four days
- Dedicated to employee development
  - Book reading program
  - Health and fitness programs

Products Sold:

We buy used cell phones & PDAs, including Apple, LG, Blackberry, HTC, Motorola, Nextel, Nokia, PalmOne & Samsung.

(800) 248-5360 I www.pacebutler.com

Services

GoIndustry DoveBid

GoIndustry DoveBid is conducting an Online Auction of Late Model Network Switches, Network Test & IT Equipment, by order of Tellabs on June 26-28, 2012. The equipment is located in Hayward & Petaluma, California; Chicago, Illinois; Dallas, Texas & Richmond, British Columbia.

Products Sold:

• Network, Traffic & Security Testers • Modules
• Service & Network Routers • Switches
• Rackmount Servers • LCD Monitors • Laptops

(248) 514-3336 I www.go-dove.com/en/event-16664

By order of **Tellabs**

LATE MODEL NETWORK SWITCHES, NETWORK TEST & IT EQUIPMENT

Online Auction

Bidding open: Tuesday, June 26th, 2012 at 1:00 AM PDT

Lots closing from: Thursday, June 28th, 2012 at 12:00 PM PDT

Locations: Hayward & Petaluma, California; Illinois & British Columbia, Canada

Inspection: By appointment only

Featuring:

- **Network Testers:** (4) Spirent SPT-9000A; (2) Spirent SPT-11U; (4) BreakingPoint Firestorm
- **Modules:** (30) Spirent
- **Traffic Testers:** (4) Ixia 400T
- **Security Tester:** Mu Dynamics MU-8010
- **Service Router:** Alcatel 7750
- **Network Routers:** (2) Juniper M7i
- **Cisco Enterprise Switches:** (3) 7606-S; (2) 7604; (2) 6500
- **Cisco Switches:** (45) C3750 Gigabit
- **Switches:** (30) D-Link, Linksys & Netgear
- **Dell PowerEdge Rackmount Servers:** (30) R710; R610; (10) R210
- **Cisco Rackmount Servers:** (3) UCS-C210-M2
- **Sun SPARC Enterprise Rackmount Servers:** T5220; (15) T5120; T3-1; T2000
- **Sun Rackmount Servers:** (12) SunFire
- **LCD Monitors:** (250) 19", 20", 22" & Widescreen
- **Laptops:** (150) Dell

Auctioneer & License: IL – David S. Fox #441.000996

For further information, please contact: To view and bid on the lots, please visit www.go-dove.com

WILLIAM HLADY Tel: 248 514 3336 Email: william.hlady@go-dove.com

Global Leaders in Surplus Asset Management

www.go-dove.com

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